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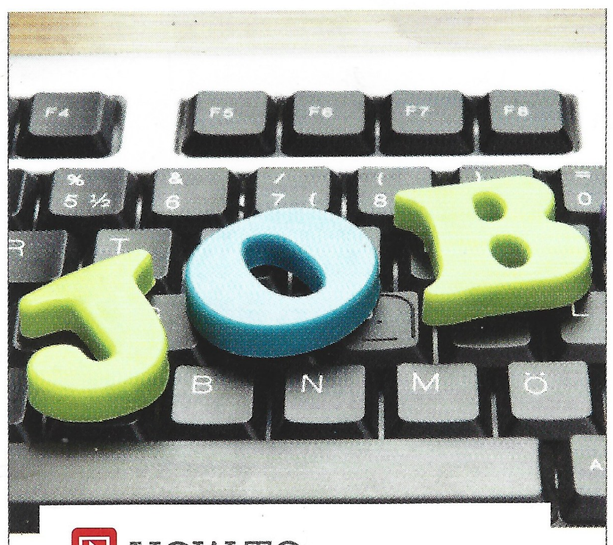


HOW TO:
Find a job online
The best sites for finding work in South Africa rated and reviewed.

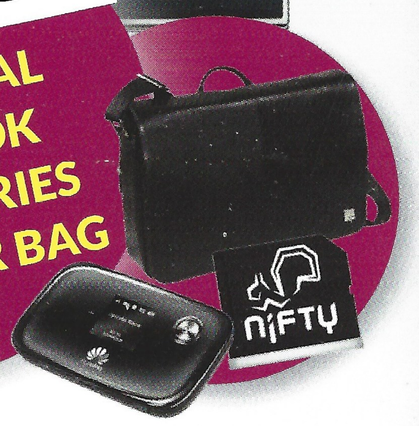
REVIEWED:
Wolfenstein: The New Order
The shoot-em-up that changed the world is back.

FULL HD vs 4K

Which type of TV tech should you buy for your living room?

PLUS!

5 ESSENTIAL MACBOOK ACCESSORIES FOR YOUR BAG



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BIG SCREEN ENTERTAINMENT

Do you know your 4K from your HDTV? Does it matter, and should you care? Back when flat panel TVs were new, getting the resolution right was the difference between entering a brave new world of large screen entertainment and trying to figure out whether the oversaturated, blocky smudge in the centre of the screen was a football or Luis Saurez' fangs sticking out. Now, however, the importance of upgrading from mere "Full HD" to "Ultra HD" or 4K is less clear - which is why we've sent our intrepid hardware reporter out to find out if four times the number of pixels are worth it or not over on **page 19** this month.

And what would you do with all those extra pixels? Play games? We've got loads of them reviewed on **page 28** on. Or maybe look at high res underwater pictures you took yourself on your last holiday? We've got that covered too (**page 39**).

We do all this, because **Tech Made Easy** is your indispensable monthly guide to technology in South Africa - and for loads more features, fun and advice each and every day you should check out our parent site, **htxt**.africa too.

Adam Oxford
Editor-in-Chief
htxt.africa

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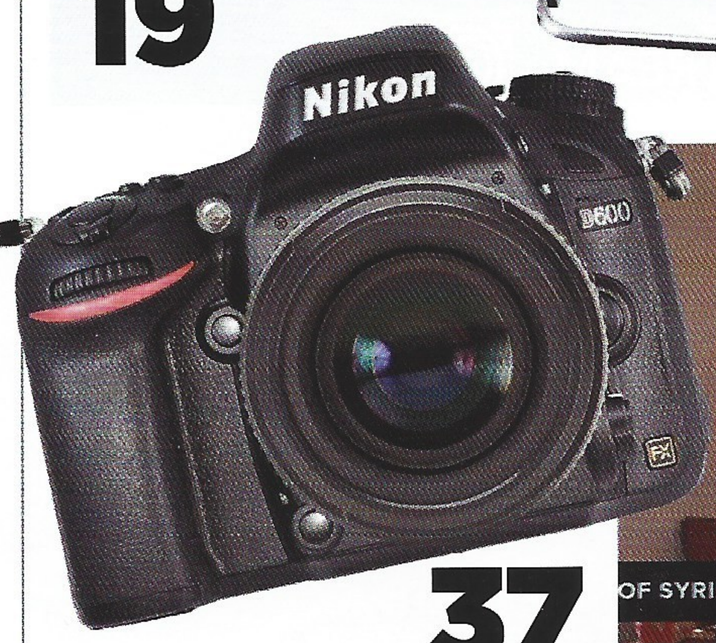

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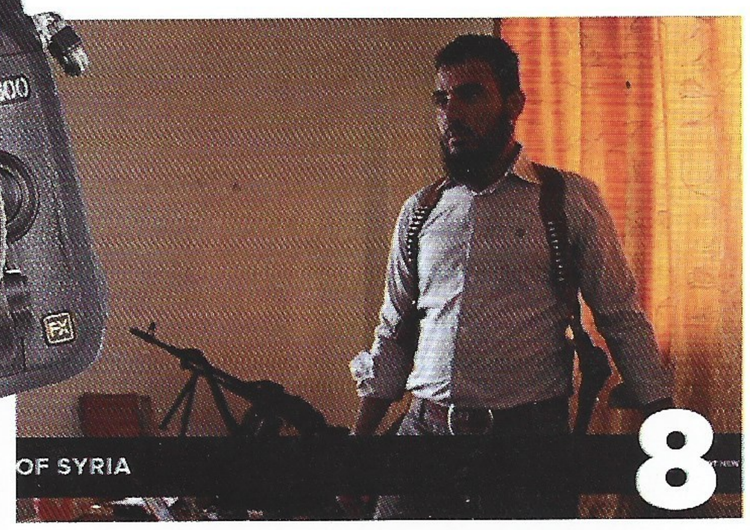

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FACEBOOK BUYS WHATSAPP FOR R200BN

Facebook has just dived into its war chest again to make another big purchase, this time it's buying the popular messaging service WhatsApp.
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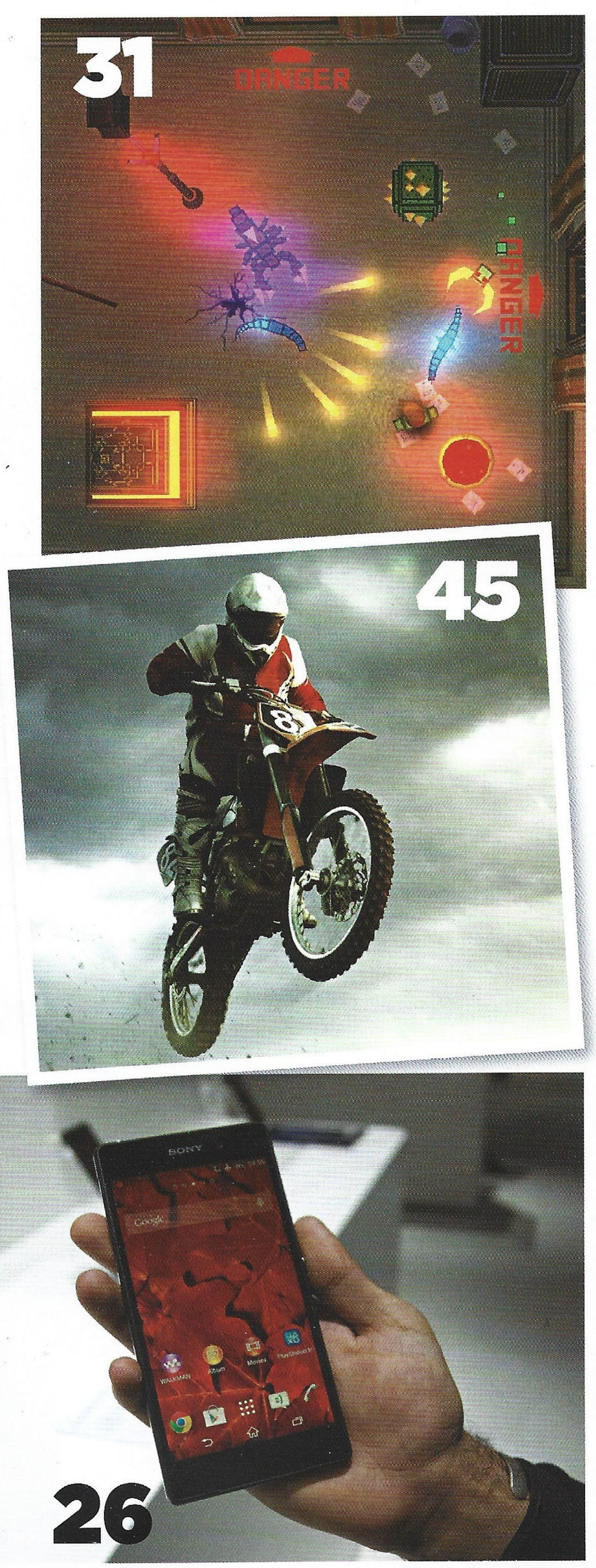

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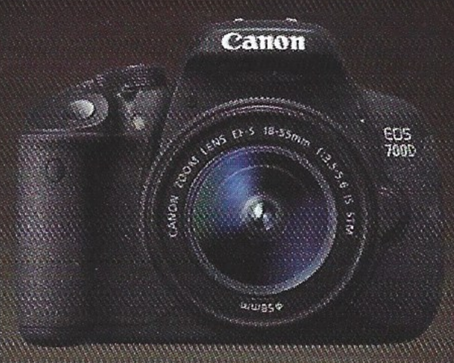
POWER TO YOUR NEXT STEP

We all have a next step. Make yours getting more creative with photography.



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New SA-designed 3D printer goes into production

There's a new locally-designed 3D printer in town and if all goes according to plan it'll be bigger, stronger and cheaper than existing 3D printer designs.

Peter van der Walt is a man who knows a thing or two about 3D printers, having built somewhere in the region of 150 over the last few years. van der Walt is also a founding member of South African makers' collective House4Hack, and two years ago he started the OpenHardware.co.za, hoping to "bridge the gap between the hobbiest" and retail. Through the online store of OpenHardware.co.za, he's sold over 110 custom-built 3D printers to early adopters and enthusiasts and has supported home-grown designs like the award-winning RepRap Morgan at prices well below those you'll find in RS Online or Dion Wired both in kit form or fully assembled.

The launch of the new printer marks a significant new period in the evolution of OpenHardware.co.za. It's the first printer the firm has designed totally in-house, but more importantly it's also the first aimed at general consumers rather than those willing to try and build a 3D printer themselves. It comes pre-assembled, for a start, and requires less maintenance than a normal kit-based printer.

Previous and current RepRap kits sold through OpenHardware.co.za – principally the Prusa Mendel-based EcksbotZA and RepRap Morgan – are a lot of fun, but the primary aims for the new printer are that it can be easily and relatively cheaply mass produced and be very reliable.

The printer itself is an evolution of a design drawn up by fellow South African hacker Waleed Kahn for an open source CNC milling machine, which is also on sale at OpenHardware.co.za.

> *"OpenHardware.co.za sells low cost engineering parts like OpenBeam kits to reseller partners, and also operates its own direct shopping frontpage."*

"On March 23rd, I had a long conversation with our Solidworks engineer, Waleed Kahn, to start development of a small, easy to manufacture 3D printer using the same production methodology we used on the OpenCNC-ZA machines, namely sheetmetal," says van der Walt, "I was in Nelspruit on a project, and had a late afternoon return flight on the Saturday. I had to checkout of the guesthouse early in the morning, which left me with six hours in Nelspruit and nothing else to do but park in the Wimpy at Kruger Mpumalanga, armed with a notebook and Sketchup. By the time I boarded I already sent off the files of the frame design to Waleed for review."

Like fellow House4Hacker Richard van As' RoboBeast, it's the rigidity of the frame compared to homebrew models that should keep the printer performing accurately time after time – although van der Walt is aiming for a price tag around a quarter of that of the RoboBeast. The tough design isn't just about ease of use.

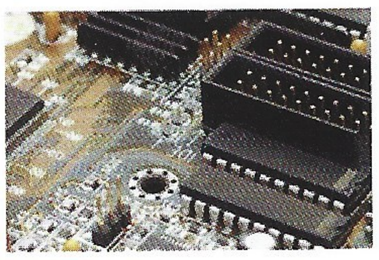
"[Selling 3D printers in] kit form saves on assembly labour but the support load does take its toll," says van den Walt, "When you work on the low markup we were using one broken controller can eat all the profit on one kit in a minute. Not offering a warranty is the standard open source hardware backup plan – but it should not be like that."

van der Walt says that he's planning to have more models to use as demo units, there's just one thing left to decide: the new printer doesn't have a name yet.

"Internally we referred to it as Babybot," he says, "Because we planned to have a 100x100x100mm print area. Turns out it's a bit bigger than that after assembly, and we plan to have a 200x200x150mm-capable frame in the coming week or two."

More news at htxt.africa
go to htxt.co.za

SA STUDENTS WIN INTERNATIONAL SUPERCOMPUTING COMPETITION AGAIN



A team of South African students have won the Student Cluster Supercomputing Competition at the International Supercomputing Conference.
Bit.ly/1nOtKIU

SWIFTKEY FOR ANDROID IS NOW FREE

Until now SwiftKey had been a $4 (R53.99) paid-for app with a free 30-day trial period for users who wanted to try it out before they bought it.
Bit.ly/1I3Z6iE

Free WiFi coming to taxi ranks and taxis in South Africa

The South African National Taxi Council (SANTACO) announced today that it will be providing free WiFi to commuters in taxis and around taxi ranks, effectively allowing passengers to surf the web for free. While the project has been spearheaded by the taxi association, it is being implemented through a collaboration between Telkom, who will be providing the connections, and Wi-Taxi South Africa, who will be responsible for the infrastructure. "We intend to install WiFi in all our taxis and taxi ranks to give the commuters who use them access to WiFi. I must emphasise that it will be for a limited time, but it will be continuous as you respond to interaction with the APN, you will be able to access more data," said SANTACO CEO Nkululeko Buthelezi.

Commuters will be able to stay connected while hopping between different taxis on their route by connecting to each taxi's WiFi router. As for when the first WiFi connectivity will be implemented, Buthelezi said that given the size of South Africa's taxi industry, it should take about two years for all taxis to be provided with connectivity.

"What we are doing in terms of our rollout, we have a number of phases. Phase one relates to around 500 taxis and targeting all the major taxi ranks in Gauteng, and then moving to other provinces. The taxi fleet is a strong 250 000-odd, so our intention is that we roll out in the next two to three years. But Telkom said that we can do about 5 000 rollouts per month, so in about two years we should cover all the taxis. It's going to be a huge project and we are very excited to bring this to millions of South Africans," he concluded.

Electricity-free fridges to revolutionise medicine in rural areas

Vaccines save lives. In 2011 Unicef estimated that two to three million children lives are saved each year simply because they were vaccinated against common diseases while an additional 1.5 million children died in 2011 because they were not. One of the biggest problems in getting vaccines to certain countries in South-East Asia and Africa is a lack of electricity to keep the vaccines cold.

Meet the Sure Chill. It's a fridge that doesn't need electricity to stay cool in fact once disconnected from the loving flow of electrons from a nearby wall plug, one of the beefier Super Chill models has the ability to keep its contents cold for up to 35 days.

It manages this by using a unique property of water that allows the Sure Chill fridge to maintain a four degrees Celsius temperature which just happens to be the perfect temperature to keep Vaccines nice and fresh while they're being transported.

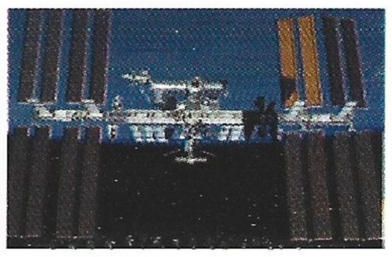
These fridges aren't just a pipe dream either, there are currently more than 200 modified Sure Chill fridges sponsored by Unicef and the Gates Foundation being used to deliver vaccines in the Philippines.

More stories at htxt.africa
go to htxt.co.za

LEGO ANNOUNCES 'FEMALE SCIENTISTS' MINIFIGURE SET

The Research Institute set features an astronomer, chemist and a paleontologist, each with a base plate and accessories.
Bit.ly/1l84Qqo

NASA BEAMS 27-SECOND VIDEO TO EARTH IN 3.5 SECONDS



The team inside the ISS beamed a 'Hello World' video to the Optical Communications Telescope Laboratory at the Jet Propulsion Laboratory facilities.
Bit.ly/1n5acRt

New PS Vita action bundle brings you big names, for less money

The next Mega Bundle for the PlayStation Vita is almost upon us. Vita owners will be able to buy five excellent games and an 8GB memory card for their handhelds for R599 from all major South Africa gaming retailers. The games on offer include the superb brawler Injustice: Gods Among Us Ultimate Edition, the timing-tester Batman: Arkham Origins Blackgate and Kratos' latest Vita outing, God of War: Chains of Olympus. Rounding out the rather impressive line-up are Killzone: Liberation and PlayStation Allstars: Battle Royale. At R599, that's just a bit under R120 each – not bad at all for such high-profile games. The pack comes with an 8GB memory card and download vouchers for all five games. All told, gamers are getting many, many hours of triple-A entertainment in this one bundle making it well worth the cash. The new Action Mega Bundle will be available with just the games and the memory card, but there's another one that includes a PS Vita as well, but pricing on that bundle hadn't been confirmed by press time. Keep an eye on your favourite gaming retailers to stay abreast of developments.

SanDisk aims new SSDs at gamers

Gamers will soon have access to a new range of high-performance solid-state hard drives from SanDisk. Polygon reports that the new range, dubbed SanDisk Extreme Pro, was shown off at Computex recently with SanDisk loudly proclaiming an unprecedented 10-year limited warranty and "greater performance consistency over multiple competitors per PCMark 8 benchmarks".

These drives will allow gamers who demand excellent performance from their systems to load games incredibly quickly, meaning shorter waits between launching and playing, and far shorter level load times too. They can be used in traditional PC setups to speed up game load times, or as replacement drives for the PlayStation 4's storage. That 10-year limited warranty is unusual as solid-state hard drives are based on Flash memory, a technology that has traditionally offered a lifespan of five years or less due to the limited number of reads and writes it is capable of. We've asked SanDisk how they've managed to get around that particular challenge, and will update the story with the details once they come back to us.

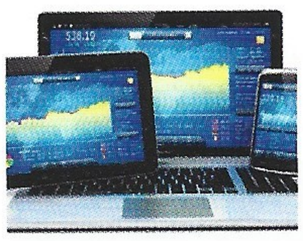
The new drives will be available in June, and will be available in 240GB, 480GB and 960GB capacities. We've reached out to SanDisk's local representatives to get word of local pricing and availability.

Germany pulls out of South African space telescope

Auf wiedersehen, German science (and money), we won't be seeing you in the Northern Cape after all. The country's secretary of state for science has written to the organisation responsible for overseeing the construction of the ambitious Square Kilometre Array radio telescope to say that the country intends not to renew its commitment to the project when current agreements run out in a year's time.

The SKA Organisation (SKAO) has released a statement saying that it regrets Germany's decision, but that it's unlikely to affect the project in either the short or long term. According to the statement, Germany's decision to leave is purely financial and based on budgetary cutbacks at home. The SKA itself is an enormously important project for South African science, and the decision to build one half of the radio telescope grid here (the other is in Australia) has had a big effect on research in the field. The South African SKA base, which is already being built, will eventually consist of thousands of antennas in various sites around the country. Once complete, SKA's imaging resolution will be around 50 times that of the Hubble Space Telescope and will require enormous computational power to crunch the data recorded.

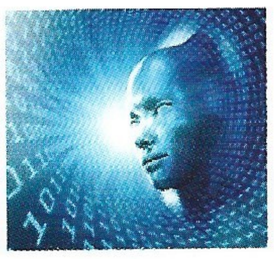
AFRICA TO BREATHE NEW LIFE IN PC SALES



With the surge in tablets, gaming consoles and mobile phones, it might seem like the traditional PC is on its way out.

Bit.ly/1lmwxvr

TURING TEST DEFEATED BY ADVANCED AI



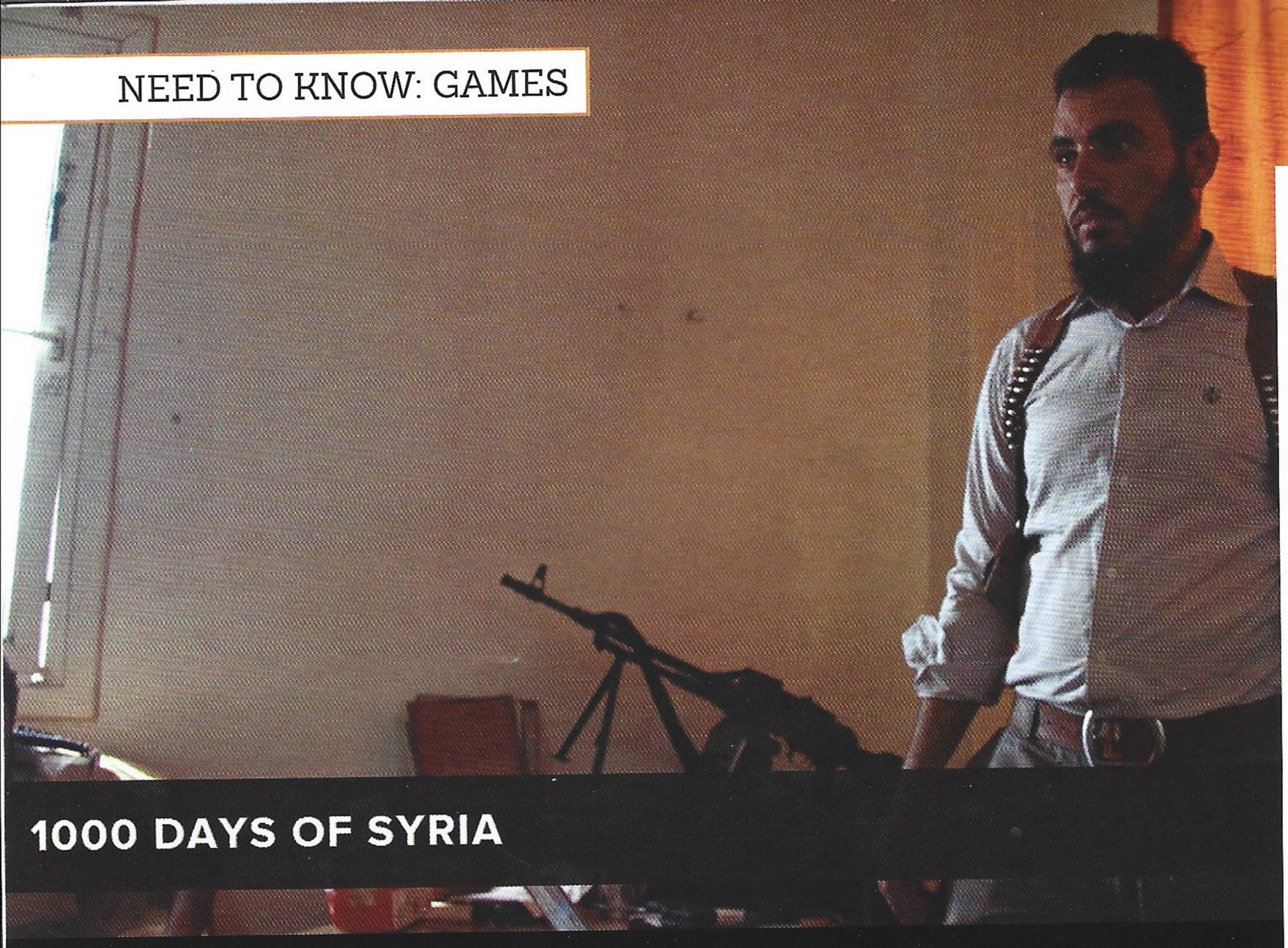
A computer programme has finally passed the Turing test by fooling researchers into believing that it's actually a 13-year-old boy called Eugene Goostman.

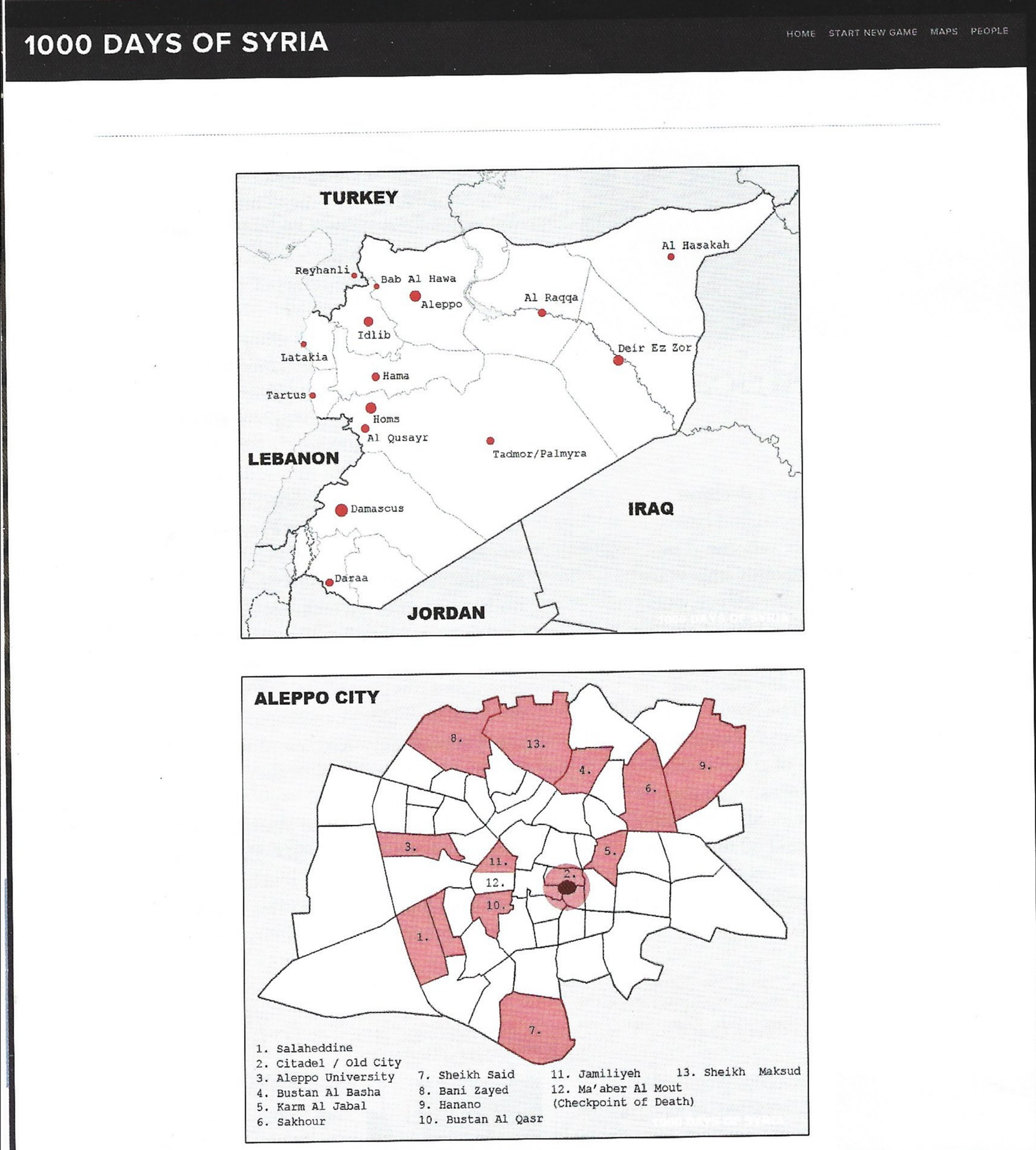
Bit.ly/1in4YOh

GAUTENG SCHOOLS TO GO TEXTBOOK FREE

There are plans to transform state schools in the area over the next few years by completely doing away with textbooks.

Bit.ly/1l7uerH





Is South A

The most cutting-edge thinkers in publishing are developing ways of telling stories.

South Africa is a media-savvy nation, but with what sort of media is it savvy, so to speak? Like many countries around the world there are a few well-established trends that cause concern for those who like their news traditional. In terms of audience numbers, TV, radio and newspapers are stagnant or in decline, while videogames are the fastest-growing market segment (predicted to overtake music and film by 2017).

It's a concern for newsrooms around the world and hundreds of millions of rand are being spent on working out how to make sure future generations stay engaged with serious topics in the medium of their choice. In the same way Leica turned journalism into photojournalism, so the most cutting-edge thinkers in publishing are developing ways of telling stories using the current medium of choice – games. Hence, news as a game. Newsgaming.

NEWSGAMING

"News media are now competing with Candy Crush for attention," says Dr Tomas Rawlings, design and production director for Auroch Digital, a pioneer in the field. "The challenge facing news is to be as interesting as games."

Many newsrooms around the world are already spending millions investing in "games desks" that sit beside traditional news desks and contemporary digital teams. Is South Africa ready for it? The term "newsgame" itself was coined by South American developer Gonzalo Frasca. Frasca's September 12: A Toy World was an attempt to explain why, in Franca's view, the War On Terror was a futile and unwinnable proposition from the start. It was

Africa ready for newsgaming?

a simple game – acting through a gunsight you're tasked with shooting terrorists in a non-specific Arab town. Every terrorist you kill is mourned, and after mourning, the mourners get angry and in turn begin performing acts of terror. Like TicTacToe in the movie Wargames, it's a game you can't beat, destined to continue forever in a bitter stalemate. September 12 was lauded by many as pushing the boundary of games. However, it didn't really report the news; instead, it merely represented an opinion and attempted to stimulate debate around the news.

> *"It might surprise you to learn that we're already seeing local newsgames. Most notable is Flappy Zuma."*

PRESENTING THE NEWS

In contrast, newly-released hypertext fiction newsgame 1000 Days in Syria, produced by reporter Mitch Swenson, does present the news. The game came about as a result of Swenson's trip to Syria in late 2013 and his subsequent frustration in the lack of interest in the topic – and it's been generating plenty of worthy headlines in its own right.

Swenson says that he has produced the game in an effort to inform people about the Syrian conflict in a manner that is more effective than traditional media. The game depicts the first 1 000 days of the Syrian uprising from start of the opposition protests on March 15th 2011 to the dismantling of Assad's chemical stockpile on December 9th 2013. You can play the days from the perspective of a mother of two in Daraa, a rebel youth in Aleppo or an American journalist in Beirut. As you play, you click through links and learn about the fictionalised characters as well as real-life events and people.

The game is not ground-breaking in its design, but it is highly effective as a newsgame. Each page of the game is accompanied by an update of the real life events of that day in the Syrian uprising. This is effectively informing the players of the events that happened – I was one of the naïve target players of Swenson, and having played 1000 Days in Syria I know significantly more about the events of the uprising. This informative approach is coupled with a series of choices that affect how the current character progresses in the narrative.

HARD CHOICES

Sometimes there are no correct choices. For example, you have to decide between leaving a war-torn city, but at the sake of losing communication with your husband. These emotive choices are highly effective in forcing players to empathise with daily choices a Syrian citizen stuck inside their own war-torn country may be forced to make.

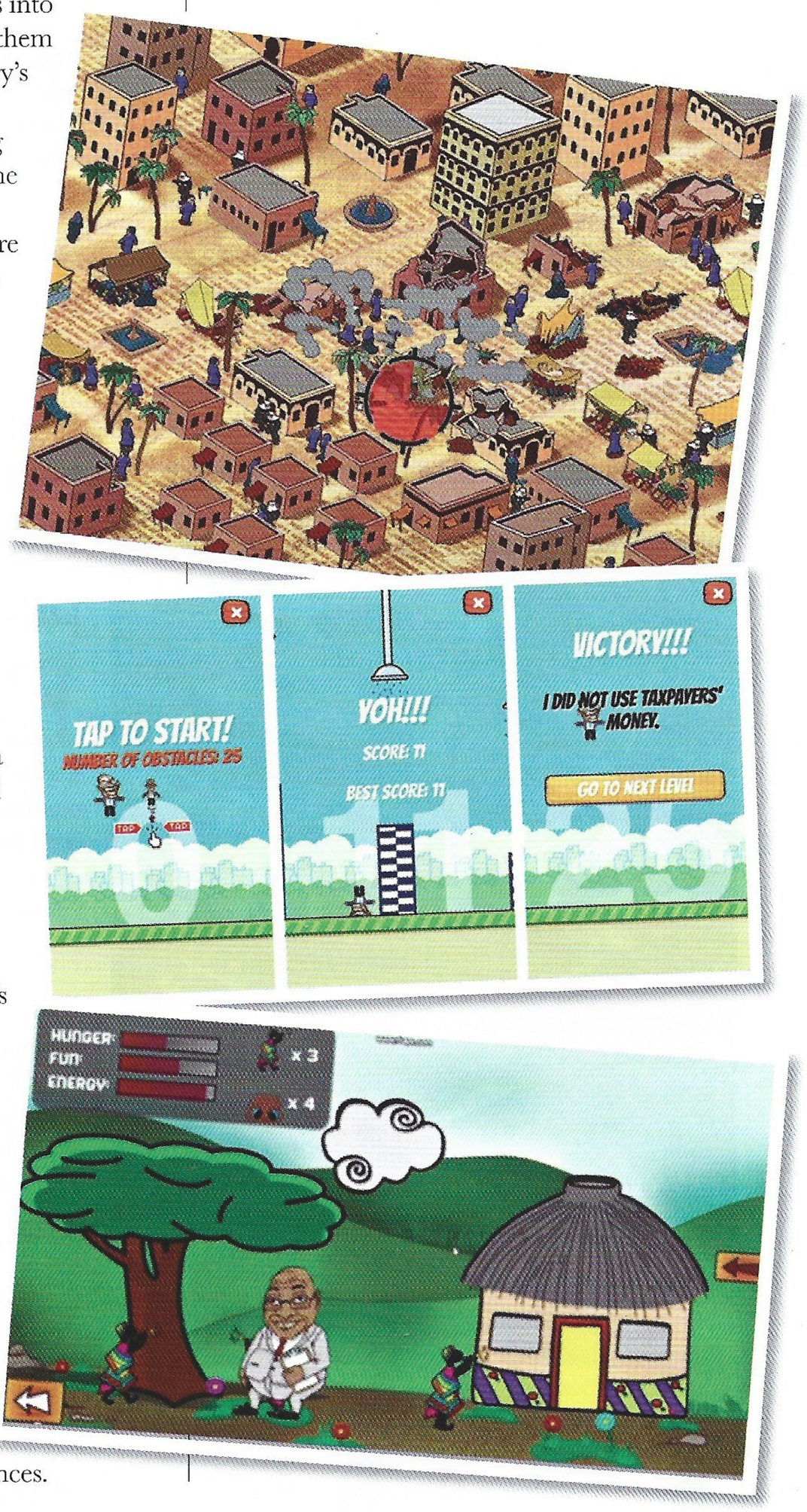
1000 Days in Syria is very successful in what it tries to do. It immerses players into the Syrian context and informs them about the timeline of the country's uprising, while making players empathise with the people being affected. The success of the game begs the question of whether newsgaming should be used more frequently in presenting news to the public.

SOUTH AFRICAN NEWSGAMING

It might surprise you to learn that locally, we're already seeing several attempts at creating newsgames. Most notable is Flappy Zuma. Released just before the election, this mobile game is an interpretation of the cult hit Flappy Bird in which the eponymous bird is replaced by a flapping Jacob Zuma. It proved wildly popular, rising to the top of the Apple Store charts in SA within two weeks of release. Flappy Zuma is at best a crude example of a newsgame, as it's more a puerile satire (and there's nothing wrong with that). But what it does show is how effective local newsgames could be if done well. There's also the pet game, Zumagotchi, which has you looking after the South African president as your own digital pet – keeping his 'hunger'; 'fun'; and 'energy' at good levels. It is another crude example of a newsgame, but it does reflect some of the nuances of Zuma's several reported offences.

There's certainly a lot of potential for more South African-centric newsgames to be produced. It is easy to imagine an Nkandla game where you play as the architect of the dubious compound, a SimCity-style game that annotates parts of the public protector's report to various outbuildings maybe. Or perhaps you could take control of a pepper-spraying drone trying to force miners back into the pits, while at the same time being given cuttings from Wits' recent report into the real state of wages in the sector.

We are a country flooded with potential newsgame topics – here's hoping we see more of them in the future. **by Ben Myres**



South Africa gets its own Xbox app

Good news for Xbox gamers in South Africa. Microsoft announced today that it has launched a dedicated South African Xbox application, so you can find out which games are and (by omission, aren't) from the comfort of your Windows 8 tablet or Windows Phone handset.

"The launch of our application arrived just in time as we are planning on posting tons of E3 content next week. It will be the one destination to get all your behind-the-scenes footage of the hottest games!"

Xbox South Africa's public relations manager Graeme Selvan explained that by using the app, you will get game trailers from upcoming titles, will be able to listen to the latest Xbox podcast, view photo galleries of Microsoft games, and read up on titles.

Selvan added that new content will be added over the coming months, which will expand the experience. "This app is the ultimate media hub for Xbox South Africa. See all the latest news, videos, podcast and images from the events hosted by Xbox South Africa. That's not all, post a tweet with the hashtag #xboxza and see your tweet come alive in the app."

New graphics tech bringing console-quality eye-candy to iOS 8

Graphics on Apple's iPads and iPhones are about to look even better thanks to a new technology called Metal, that will make more efficient use of the hardware powering those contraptions. Apple has apparently been working with big-name studios and developers (Epic Games, Electronic Arts, Crytek and Unity) to ensure modern game engines run smoothly on their smart-things. Work is so far advanced that Apple was able to run an Unreal Engine 4 demo live on stage last night – on an iPad. Apple software engineer VP Craig Federighi said that Metal will replace OpenGL as the mechanism whereby developers get access to the iPad and iPhone's hardware. He also said it would offer "near bare-to-the-metal access to the power of A7", which should allow developers greater technical freedom to find ways to maximise their games' performance.

At the end of the day, what does that mean for you? Console-quality graphics on your iPad and iPhone for starters, running at very playable frame rates and in-game graphics that are more complex – and therefore more beautiful – than we're used to seeing.

Fancy a game of The Walking Dead pinball?

Enjoyed the Telltale Games video game version of the classic The Walking Dead graphic novels? Well, you will now be able to make the same decisions you did in the episodic series in a newly-announced pinball title featuring creator Robert Kirkman's characters. Zen Studios, who has been making pinball games themed after numerous pop culture icons, partnered with Telltale and Kirkman to create a pinball table based on the game series.

The studio explained that the plot (if there could be one) for the pinball game will follow the event from the first season, with locations like Clementine's treehouse and Everett's pharmacy in Macon all making an appearance.

"Zen Studios is a huge admirer of Telltale Games, and we truly cherish the opportunity to work with such amazing visionaries. Working with Telltale's The Walking Dead is a hallmark moment as we continue our quest to create the most memorable and authentic pinball experiences," said Mel Kirk, vice president of publishing at Zen Studios.

According to a press statement, it will feature choice-driven gameplay throughout all five episodes while adding a bit of originality. We are not so sure how a pinball game without actual zombies will work, but we trust that Zen Studios knows what it is doing.

women.htxt.africa

SOUTH AFRICA'S MOST IMPORTANT SITE FOR WOMEN IN IT

HEAD TO WOMEN.HTXT.CO.ZA

10 things you need to know about iOS 8

The latest update to Apple's phone and tablet operating system has just been unveiled: here's what's going to be in it.

1. INTERACTIVE NOTIFICATIONS

Got a text message? Simply tap it and reply just under the notification banner at the top of your screen without having to open the messages app. It's not just Apple's apps that can take advantage of the new feature either — Facebook notifications will now allow you to like posts with two quick taps.

2. WIDGETS FOR IOS

For those who have used Android smartphones or tablets, the concept of widgets will be nothing new. However for the uninitiated, iOS 8 will allow you to pin widgets to your notification centre that will provide you with up to date information from apps that are on your smartphone without having to open the apps themselves.

3. GOODBYE AUTO-CORRECTING KEYBOARD FAILS

iOS 8 will introduce a new keyboard with a new prediction algorithm called QuickType. The new keyboard will not only predict your next word based on your overall history of usage, it will also distinguish between the words that you most often with each of your contacts to help you avoid using some inappropriate slang with your straight-laced business clients.

4. MESSAGES GETS A MASSIVE UPGRADE

Group messaging now gives you the ability to name threads, turn off the notifications from a particular thread with 'Do Not Disturb' or leave a conversation. In addition, you will now be able to share your locations with the group (for an hour, the rest of day, or indefinitely), and send self-destructing voice and video messages by just holding down on the microphone icon, just like in WhatsApp.

5. HOMEKIT TURNS YOUR HOME INTO KITT FROM KNIGHT RIDER

Homekit will let you securely pair your smartphone to the system and control individual devices like your lights as well as grouping devices together to, for instance, close the garage door, switch off the heater and dim the lights until they're completely off when you go to bed and all of that with one command that can even be given to Siri.

6. YOUR HEALTH GETS SOME LOVE

iOS 8 will arrive with the Health app as well as the HealthKit APIs which will link all of these apps and their data together to form a single profile of your health. You will be able to choose which specific pieces of information are shared with each specific third party app.

7. THE FAMILY THAT SHARES TOGETHER, STAYS TOGETHER

Family sharing will allow you and up to five other members of you family to share pictures, reminders, calendars and locations with each other to keep everyone in the loop when it comes to family activities. Even iTunes content like apps, music and movies can be shared amongst the six family members as long as they all use the same credit card on their accounts.

8. SIRI BECOMES A BETTER LISTENER

Apple's digital assistant Siri will get some new features in iOS 8 with the Google Now-like ability to be summoned with the voice command "Hey Siri". Siri will also be able to listen while translating your command or question into text (in real time), so that you can see if she has made any errors.

9. A THOUSAND PICTURES ARE WORTH...

The new Photos app will allow you to search through every photo whether it be on the device you are using or in your iCloud Drive. You can search by location, time or date of the photos and by names of albums. New smart editing features will include adjusting the lighting and colour of photos as well as smart straightening and cropping features.

10. APPS THAT CAN TALK TO EACH OTHER

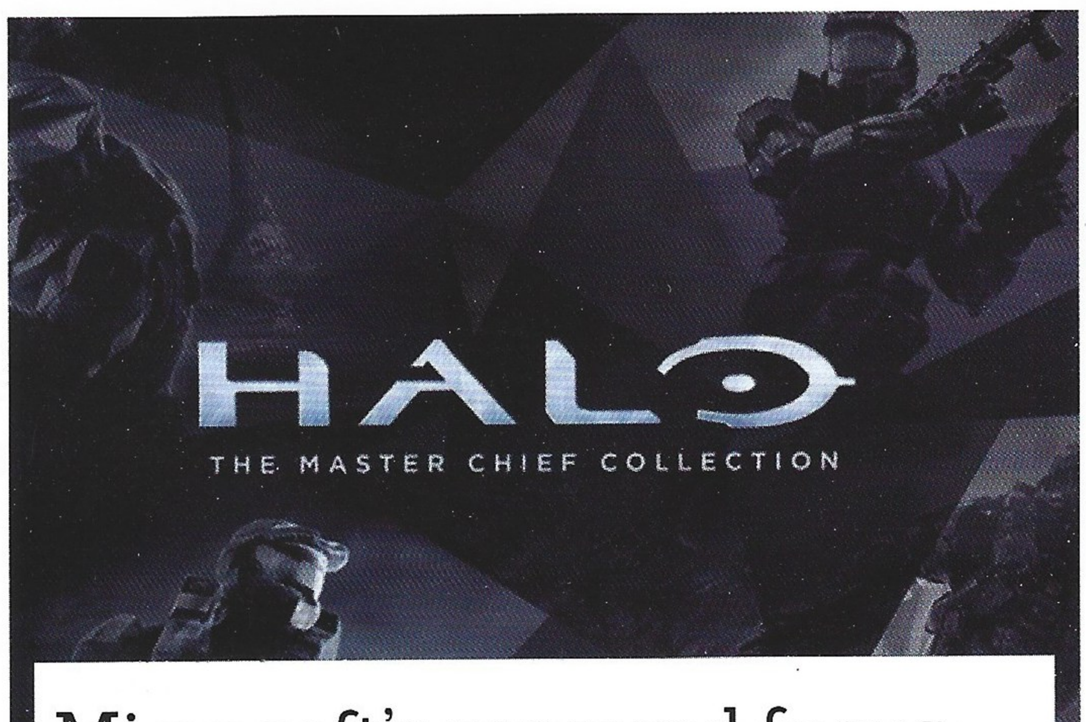
The fact that each individual app is separated into its 'own little box' is both one of iOS's biggest strengths and weaknesses. iOS 8 will allow apps to talk to each other for the first time while maintaining the security that having each app in its own little sandbox has provided up until now.

THE BEST OF E3 2014

A quick roundup of all the best news from this year's exciting Electronic Entertainment Expo.

So many games from Sony

Sony wowed audiences with a huge number of games currently in its line-up. Highlights included Bloodborne, a new game from the studio behind the Souls series that looks just as brutally difficult, the gorgeous The Order: 1886 and a new Uncharted that's coming in 2015. It also announced a "glacier white" PlayStation 4 that will be bundled with Destiny which comes out on September 9th, and the arrival of the PS4 version of The Last of Us on July 29th. Sony's bottom line is the steady stream of games we'll see from it between now and the holiday buying season.



Microsoft's renewed focus on games

After a disastrous E3 back in 2013 that seemed to focus on everything but games, Microsoft has turned things around under Phil Spencer's leadership and its E3 show has been all about the games. Big announcements included the Halo: Master Chief Collection that has all four of the franchise's main games in a single package for the Xbox One, the new Fable that will let gamers play as the villain, and the Xbox One exclusive Sunset Overdrive will have eight-player co-op and is coming out on October 28th.

Nintendo's NFC-enabled Amiibo figurines

This year's E3 saw Nintendo unveil its own take on the whole "toys that double as videogame accessories" trend kicked off by Skylanders a few years back. In true Nintendo fashion, they've been given a strange name: Amiibo, and the initial line-up features some of the company's most iconic characters like Mario, Princess Peach and, for some reason, the Wii Fit lady. The figurines have embedded NFC chips that let them communicate with the Wii U GamePad, so they don't need a separate USB platform in order to be drawn into the game.

Not quite Battlefield

EA did really well this year, showing off a compelling line-up of games that included the gorgeous Dragon Age: Inquisition and the long-awaited sequel to Mirror's Edge. However it really stole the show with its new Battlefield spin-off game starring cops and robbers called Battlefield: Hardline. It mixes Battlefield's excellent multiplayer mechanics with the idea of modern-day heists that has cops trying to stop a gang of robbers from stealing stuff. The video the firm showed E3 audiences featured explosive combat that ran through the various stages of a heist-in-progress. Expect the game on October 21st.

Assassin's Creed Unity is the stuff of dreams

Ubisoft blew Assassin's Creed fans away with news of the next game in the franchise, Unity. It's set in Paris during the French Revolution, and because it's a next-gen title only, the developers have gone to town with ludicrous levels of detail and realism that make it look jaw-droppingly good. The new assassin is named Arno, and he can be joined by up to another four assassins in separate co-op missions. The action looks even smoother and more natural than it did in AC4, and a new climbing mechanic gives you greater freedom to move about the city.

Grand Theft Auto for PC and PS4

That king of sales record holders, Grand Theft Auto V, is coming to PC and the PlayStation 4 "this fall" (our autumn) according to its developer Rockstar. But more importantly, saved games from the PS3 and Xbox 360 versions of the game will be compatible with the PS4 version, allowing you to bring across all of your progress from your initial playthrough rather than being forced to start a new game should you be one of the millions of gamers that bought it back in September.

Far Cry 4 game-less co-op

Far Cry 4 is out later this year, and will have a unique feature that Ubisoft is probably hoping will make it a hit with cheap gamers: co-op play that doesn't require everyone to have a copy of the game. All that is needed is one legitimate copy of the game, and other players can join a multiplayer game in progress by downloading and using an app that has been created just for that purpose.

The Legend of Zelda is resurrected for the Wii U

Zelda fans the world over just about cried in relief as Nintendo unveiled a brand-new Legend of Zelda game that's in development for the company's struggling Wii U console. The company promised a return to the series' open-world roots with the new game that features the biggest and most lush-looking Hyrule yet seen in a Zelda game. Rolling hills and a faraway horizon that invites exploration are the hallmarks of the new game, and should Nintendo get this right, the game could prove to be the system-seller the Wii U so desperately needs.

5 top accessories for your MacBook

Apple products and accessories tailor made for iDevices are always a good find. Here is the definitive list of must-have accessories for your MacBook.

A GOOD QUALITY BAG

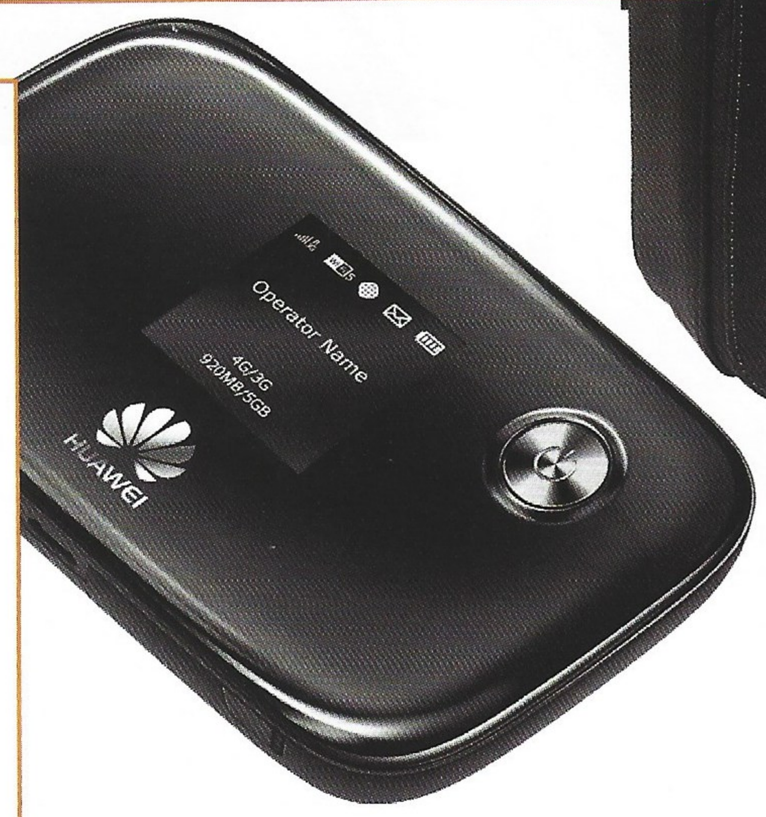
There is nothing quite like a great notebook bag to make hauling your MacBook from one location to the next a pleasure. When shopping for a good bag we recommend making sure that the bag you are about to buy has space for all of these necessities before you start lusting over a brand. However, if you're looking for something particularly lust-worthy with all of the requisite pockets and soft-touch materials on the inside as well as some of the finest quality out there, you can't go wrong with bags from Knomo.

From R799
Bit.ly/1I7Zn2P

INTERNET EVERYWHERE WITH A MIFI

High speed, portable internet is easily obtainable in this day and age, so long as you're willing to pay for the bandwidth that it entails. Of all of the portable WiFi hotspot generating devices we've had the pleasure to use our favourite is still the Huawei E5776. The E5776 is a winner because it supports both DC-HSPA+ as well as LTE connections and has amazing all day stamina from its monstrous 3 000mAh battery.

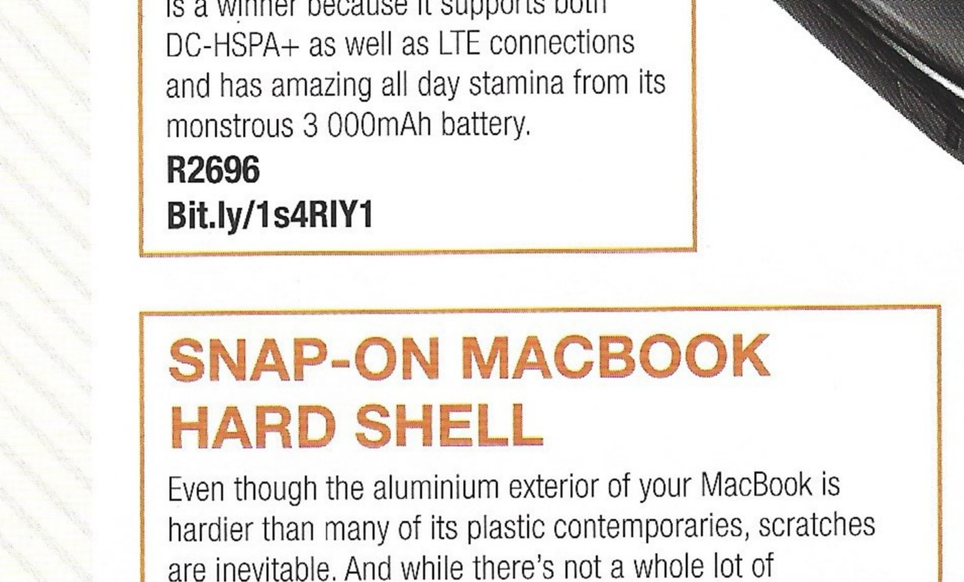
R2696
Bit.ly/1s4RIY1



SNAP-ON MACBOOK HARD SHELL

Even though the aluminium exterior of your MacBook is hardier than many of its plastic contemporaries, scratches are inevitable. And while there's not a whole lot of differences between the creative brands of snap-on cases available today although we are holding out for the new Tech21 covers when they arrive later this year after we got the chance to see their shock protection technology at work first hand (or finger at least).

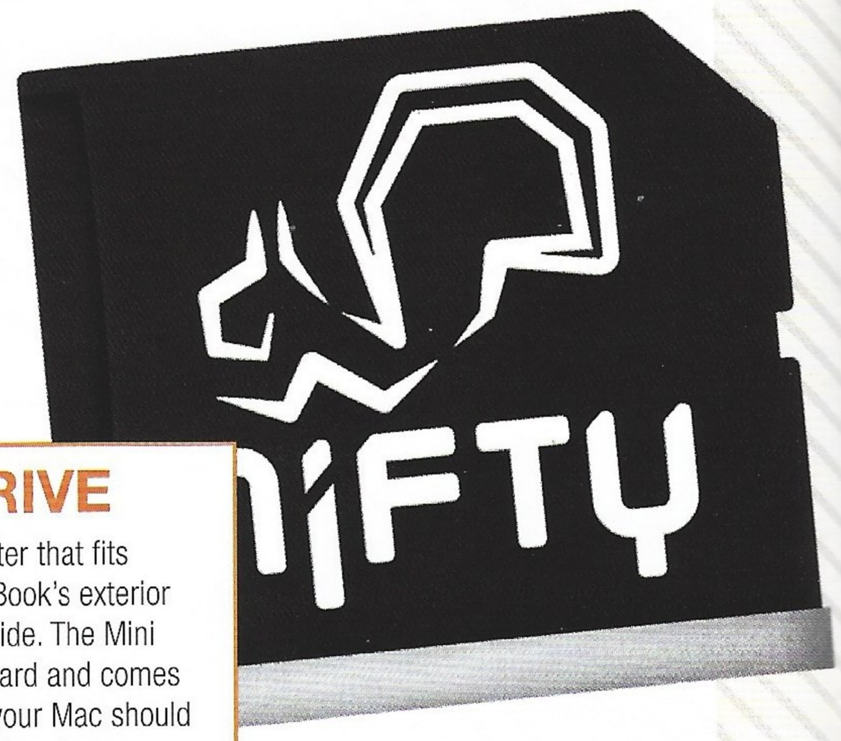
R699
Bit.ly/SxSyw4



THE NIFTY MINI DRIVE

The Nifty Mini Drive is a microSD card adapter that fits perfectly flush with the outside of your MacBook's exterior when inserted into the SD card slot on the side. The Mini Drive comes supports all sizes of microSD card and comes with a stylised removal tool to pop it out of your Mac should you need to use the SD card slot for something else.

R499
Bit.ly/SMwT3N



IKLEAR COMPLETE CLEANING KIT

Keeping your Mac clean inside and out is simple enough when you have the right equipment and it doesn't get better than the iKlear Complete Cleaning Kit. The iKlear kit on the other comes with both a travel sized and a full sized bottle of each of the cleaning fluid bottles, microfiber "chamois" cloths and antimicrobial microfibercloth which explains why it's called the complete cleaning kit.

R331
Bit.ly/1jjStDq

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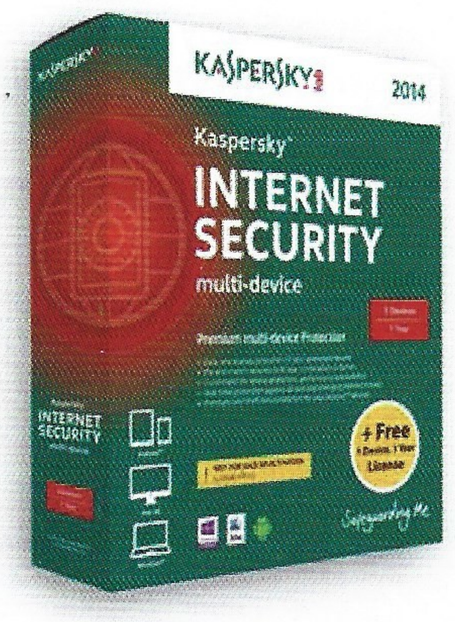

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Incredible CONNECTION

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We really hope you're enjoying this issue of htxt.africa's Tech Made Easy, because we think it's a unique magazine in South Africa in that it's completely independent, 100% locally made and full of expert advice that's both comprehensive and accessible no matter how familiar you are with the subject.

The thing is, we're also fairly sure that you'll be left wanting more. Which is why you should head over to htxt.africa now.

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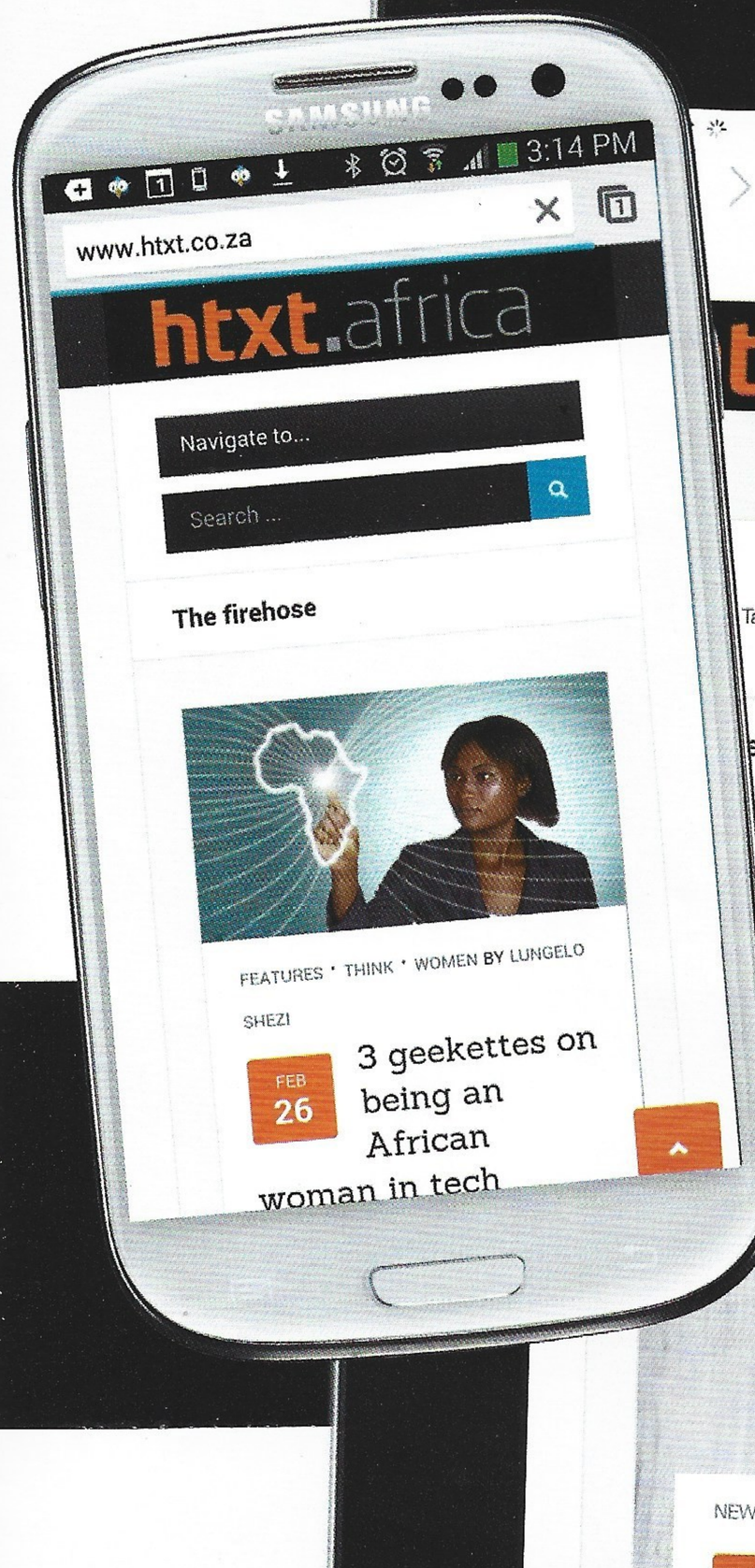
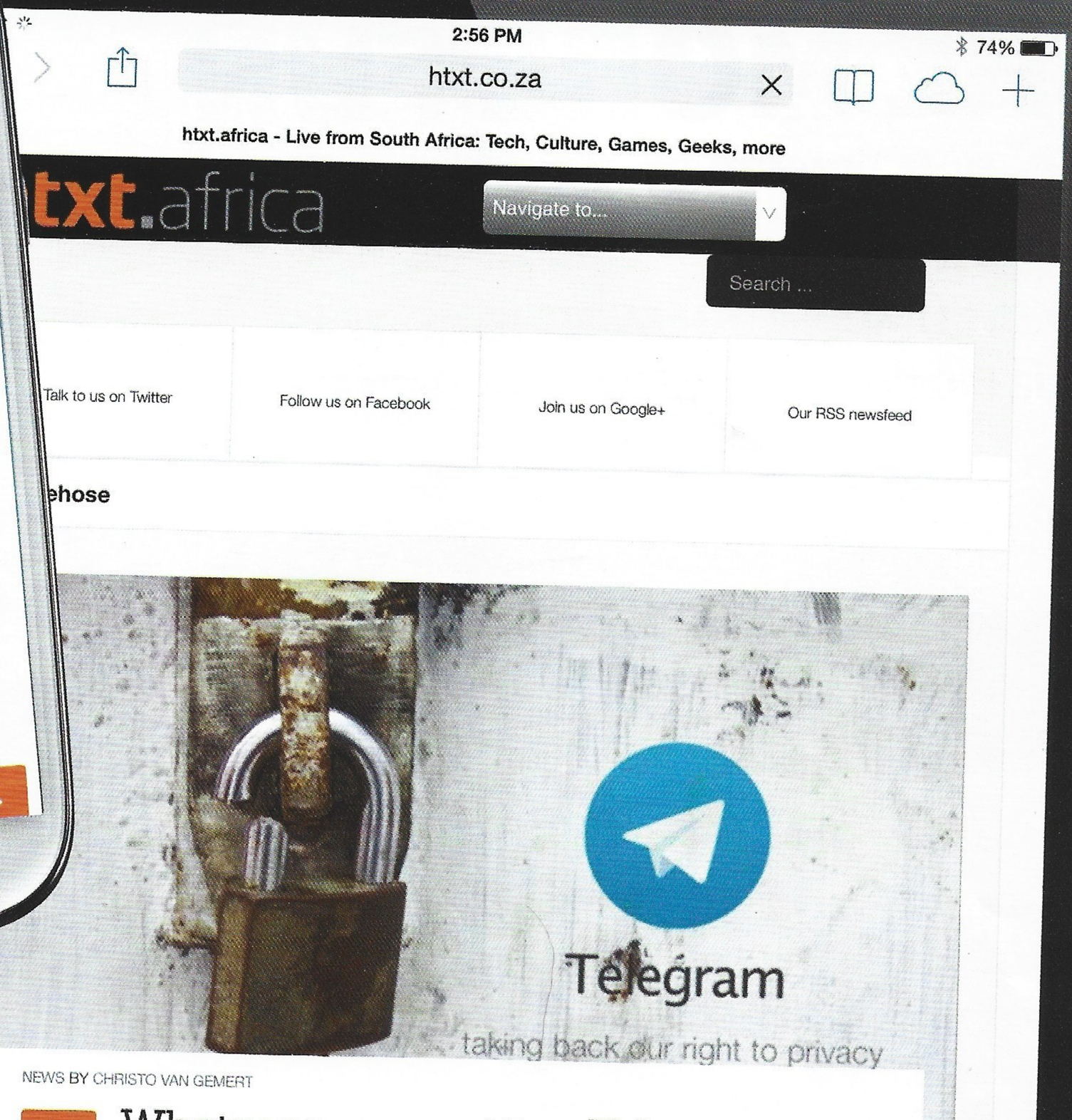
We write what we believe in, not because someone pays us to or because it's what the rest of the internet says.

Tech Made Easy is just a small subsection of what we do on our main website. Every day we carry South Africa's best news about technology, gadgets, games, business start-ups, geek culture and more. We have the broadest editorial remit of any similar site in the country, and we're passionate with it. We believe that all across Africa, technology is changing lives - and that the more we write about it and the more you read about it the better the chance is that it will be for the better.

So if you want buying advice, gaming tips, web security specials, online activism and the most interesting stories about how technology is being used right here in South Africa and across the continent, join us.

Plus:
Even more prizes can be won online

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NEWS BY CHRISTO VAN GEMERT
FEB 26
Whatsapp competitor Telegram might not be that secure
This past weekend, when Whatsapp went down for a few hours, with server issues, many people decided to try out the alternatives. It doesn't help that Whatsapp had also just been acquired by Facebook, raising privacy concerns among its ...
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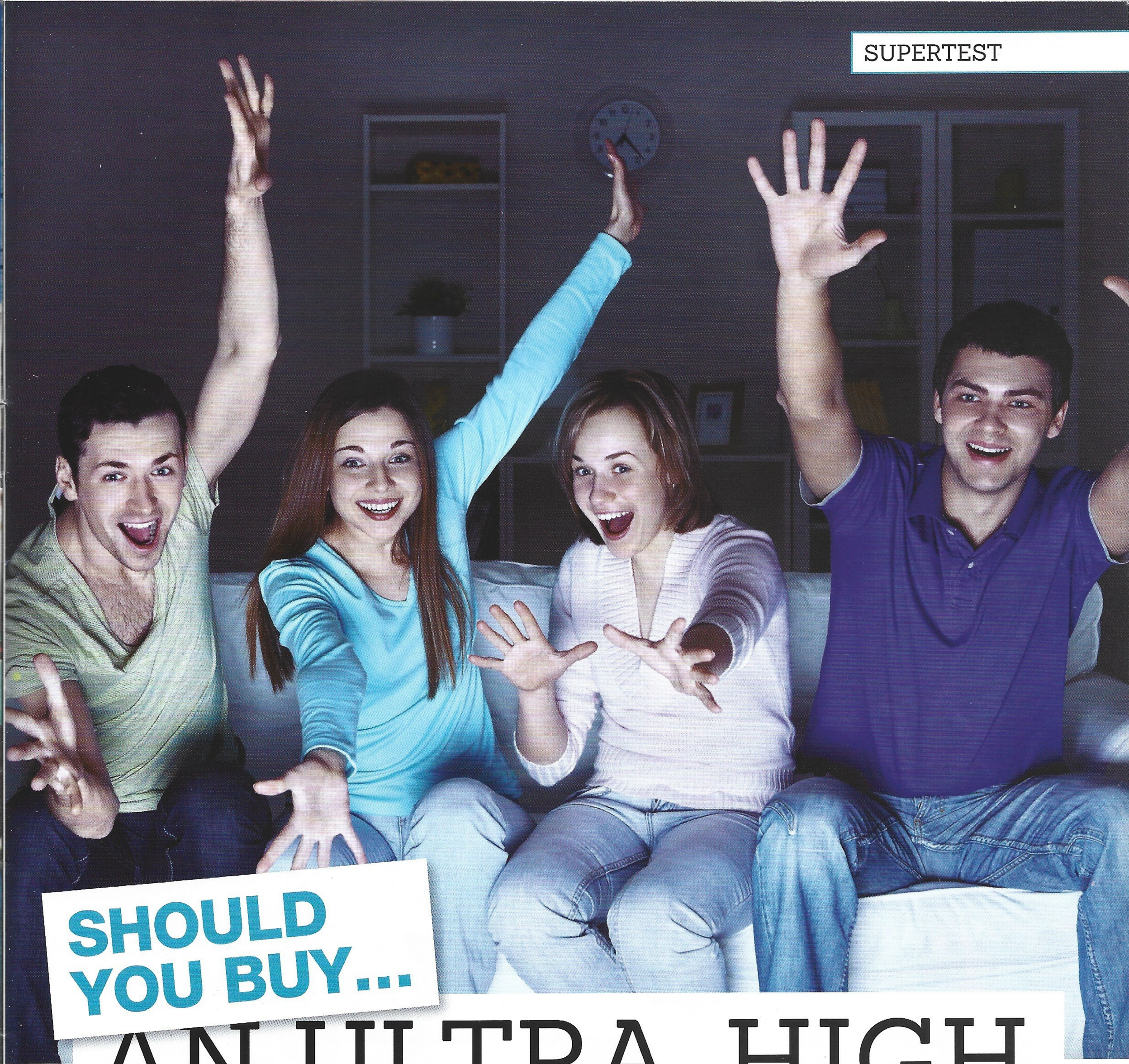

SHOULD YOU BUY...

AN ULTRA-HIGH DEFINITION TV?

We look at two of the very best smart TVs from two of the world's most highly sought after brands.

The modern television holds pride of place in most living rooms. Having shed the ugly box-like designs of the 90s and the huge bezels of the first decade of the new millennium, televisions are as beautiful to look at when they're powered down as they are with pictures flitting across their screens. Keeping up with smartphones and tablets is the name of the game and the latest generation of smart TVs not only offering the ability to stream movies, music and pictures, but also the ability to install a bevy of apps from their own dedicated marketplaces.

In 2014 it's not just about apps and media either. The latest buzzword to hit the industry is "ultra-high definition" (UHD) displays which offer unheard of clarity at the high end of the market. And with UHD televisions becoming more affordable for the average South African family it's time for us to find out whether you should jump on the UHD bandwagon now, or wait it out until 2015.

To make the judgement we've opted to look at two of the very best smart TVs from two of the world's most highly sought after brands. In the blue corner we have a look at the future of television with the Samsung 55 inch F9000 ultra-high definition TV. In the red corner is the latest generation smart TV from Sony, the 50 inch KDL-50W800B.

SONY KDL-W800B

UNDERSTATED ELEGANCE

As soon as you set up the Sony KDL-50W800B in your lounge the first thing you will notice is just how good it looks. The display is surrounded by the thinnest of black aluminium bezels which gives the impression of an edge-to-edge display when the TV is in standby mode and are small enough to fade into obscurity when the TV is on. The TV stand is made from a single curved stainless steel rod which does a fantastic job of floating the KDL-50W800B just above the surface it's standing on.

Sony's televisions have traditionally offered top-draw picture quality and the KDL-50W800B is no exception. Sony's X-reality Pro processing engine ensures that pictures are consistently sharp and vibrant with excellent looking colours from a variety of sources. The 120Hz refresh rate makes the KDL-50W800B one of the best TVs for watching fast paced action like sport or for gaming fanatics looking for a low latency panel to ensure that the latest generation of games play to perfection.

While the KDL-50W800B is a 3D TV, with two sets of active shutter 3D glasses included in the box, the 3D performance is just not as good as other TVs that we've had the chance to use. If you're looking for a television specifically to view 3D content on then you are better off looking for a different model. From a Smart TV perspective the Sony app store offered a vast selection of apps to download with a quick interface that seldom felt like it was lagging, except for when it had to wait for our internet connection to play catch up. The store is not as well laid out as Samsung's making app discovery rather cumbersome but installing and accessing apps is simple enough.

DETAILS

Design	10
Performance	7
Value for Money	6
Overall	7

R16 000
3D glasses included
Bit.ly/????????

ON THE HD SIDE

ON THE 4K SIDE

SAMSUNG 55F9000

THE FUTURE IS NOW

Samsung has truly created a beautiful television with the 55F9000 smart TV. Whether you choose to mount it to a wall with a bracket or use the supplied stand you will be left looking at it in awe whenever you sit down in front of it.

Samsung has chosen to move all of the ports from the back and sides of the TV into a 'One Connect Box' which also houses its quad core processor and all of the software. This makes it dead simple to upgrade the features of your TV year after year just by switching out the box for a newer version without needing to replace your whole TV. Picture quality on the Samsung 55F9000 is superb. Not only does the ultra-high definition resolution panel look incredible when playing 4k content it also makes regular full high definition video look spectacular. Like the Sony, the Samsung 55F9000 excels when displaying fast moving video like sport and gaming which made it a favourite around our offices.

For those who have an abundance of natural light in their TV viewing room and have complained about having too much glare in the past the Samsung 55F9000 should definitely be on your radar. Our test unit was able to crank its brightness level up high enough to cut through most of the stubborn glare that we encountered making it the ideal companion for sunny rooms. That's not to say that dark colours suffer when using the 55F9000 either, in fact it offers deep, rich blacks that as good as we've seen on an LED TV. As far as Smart TVs go, Samsung has got the formula down pat. The interface on all of its 2014 smart TVs is clean and simple to use. Downloading apps from the Samsung app store is as simple as it would be on a smartphone, in fact Samsung has gone to lengths to almost mirror the experience of downloading mobile apps as closely possible which we think was definitely a smart move.,

DETAILS

Design	9
Performance	9
Value for Money	8
Overall	8

R32 000

A great showcase for UHD.

Bit.ly/?1pJgRXB

WHAT IS UHD AND 4K

Ultra-high definition (UHD) simply refers to a display resolution that has four times as many pixels as a full high definition display. Where full HD – the standard common today – has 1 920 horizontal pixels and 1 080 vertical ones (commonly represented as 1 920x1 080 or 1080p) UHD has twice as many in each direction making a resolution of 3840x2160.

So what is 4k then? 4k is a term given to a picture that has a resolution of 4 096x2 160 but since the resolution is so similar to that of UHD the two terms have become almost interchangeable. Both YouTube and Vimeo already allow you to upload video in 4k resolution and many of the top smartphones from 2013 and 2014 allow you to record video in 4k resolution.

WHICH HDMI CABLE SHOULD I BUY?

From video games consoles to BluRay players and even the latest satellite TV decoders, almost everything connects to a TV using an HDMI cable these days. Here's the best advice you're ever going to get when it comes to buying HDMI cable for your electronics.

There are four kinds of HDMI cable that you can buy: High-speed with Ethernet, High-speed without Ethernet, Standard-speed with Ethernet and Standard-speed without Ethernet.

Since standard speed cables can't support 1080p or ultra-high definition resolutions you're going to want to buy high speed cables only.

The Ethernet connection allows a smart TV to act as a network hub and share its internet connection with other electronics via an HDMI with Ethernet cable. Both the TV and the other device need to be manufactured with the ability to use the HDMI Ethernet channel for it to work.

Don't be fooled into spending money for specifications like HDMI 1.4a which refer to the port on the TV or BluRay player and have absolutely nothing to do with the ability of the cable to transmit a picture. Buy the cheapest, best looking, high speed HDMI cable you can find and be safe in the knowledge that it will work perfectly.

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most personal information.
So you can go boldly, not blindly.

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LET'S GO

WINNER

There is no doubt that as time goes on more and more 4k content will become available and the demand for TVs with the new UHD resolution will increase. As with all technology the price will steadily come down as that demand increases and you will more than likely find that the same TV that cost R35 000 in 2014 only costs R25 000 in 2015.

If you can afford the premium price and have the desire for one of the best TVs available today then there is absolutely no doubt in our minds that the Samsung 55F9000 UHD television should be at the top of your list. It offers everything that a smart TV should offer while still managing to be ahead of the curve with its staggering resolution.

However if you're looking for a great TV that can play regular old high definition content while delivering phenomenal picture quality, then you simply cannot go wrong with the Sony KDL-50W800B. Sony has done a brilliant job in making a great TV that also does other things well, which we happen to think is the right way for TV manufacturers to go.

SPECS-TACULAR

	Samsung 55F9000	Sony KDL-50W800B
Display size	55 inch diagonal	50 inch diagonal
Display resolution	3 840x2 160	1 920x1 080
Smart TV	Yes	Yes
Speakers	70W RMS (15Wx2 + 20Wx2)	16W RMS (8W+8W)
WiFi	Yes	Yes
Ethernet	Yes	Yes
HDMI connections	4	4(1 Side, 3 Bottom)
USB Ports	3	2 (Side)
3D	Yes	Yes
Digital (Optical) Audio Out	Yes	Yes
Built in front camera	Yes	No
Gesture controls	Yes	No

#NEWBEATS STUDIO

THE HEADPHONE REIMAGINED

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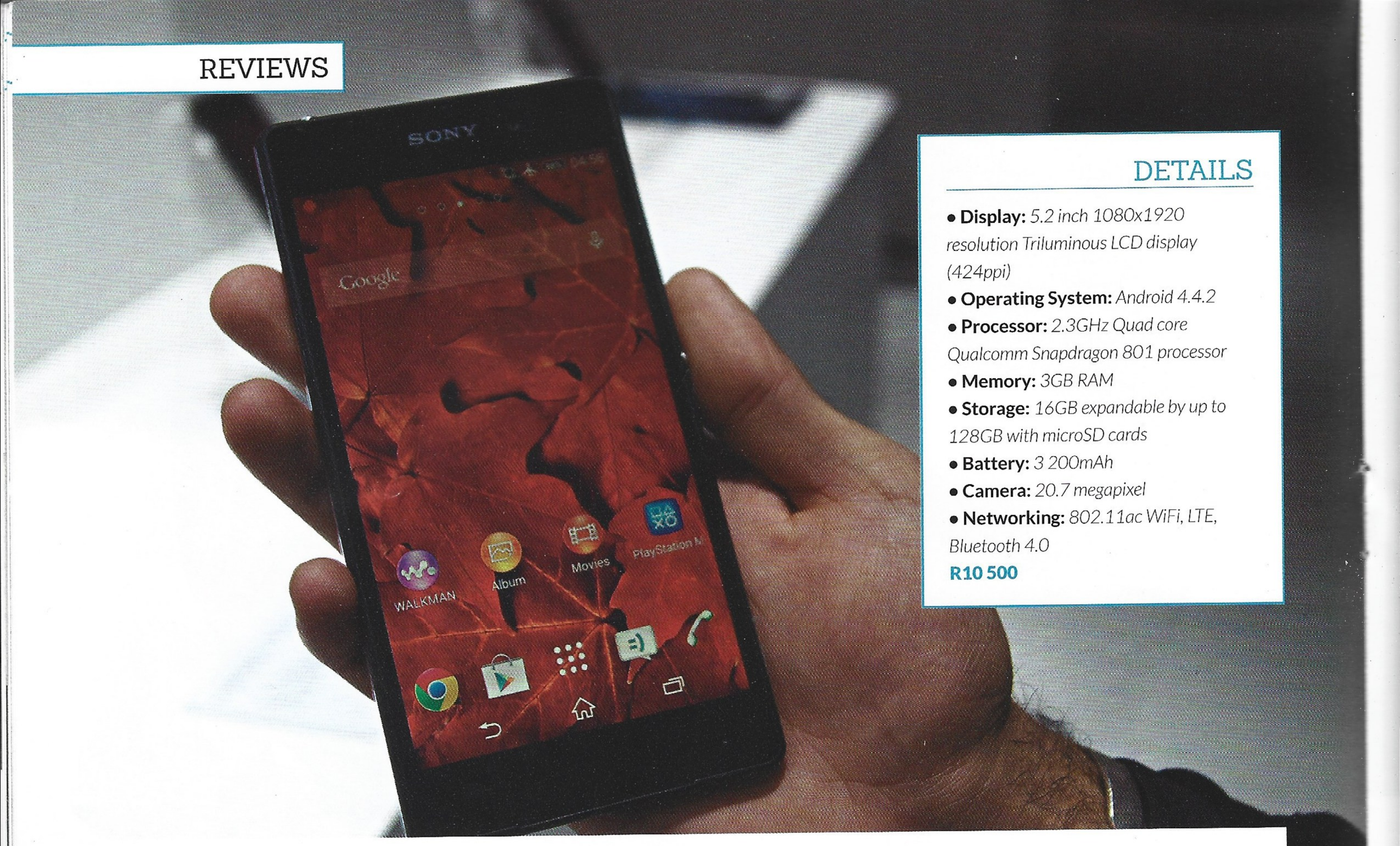
Phoenix Distribution



DETAILS

- **Display:** *5.2 inch 1080x1920 resolution Triluminous LCD display (424ppi)*
- **Operating System:** *Android 4.4.2*
- **Processor:** *2.3GHz Quad core Qualcomm Snapdragon 801 processor*
- **Memory:** *3GB RAM*
- **Storage:** *16GB expandable by up to 128GB with microSD cards*
- **Battery:** *3 200mAh*
- **Camera:** *20.7 megapixel*
- **Networking:** *802.11ac WiFi, LTE, Bluetooth 4.0*

R10 500

Sony Xperia Z2

Sony's latest premium Android phone, which features a 20.7 MP camera and 4K video recording in a compact waterproof body.

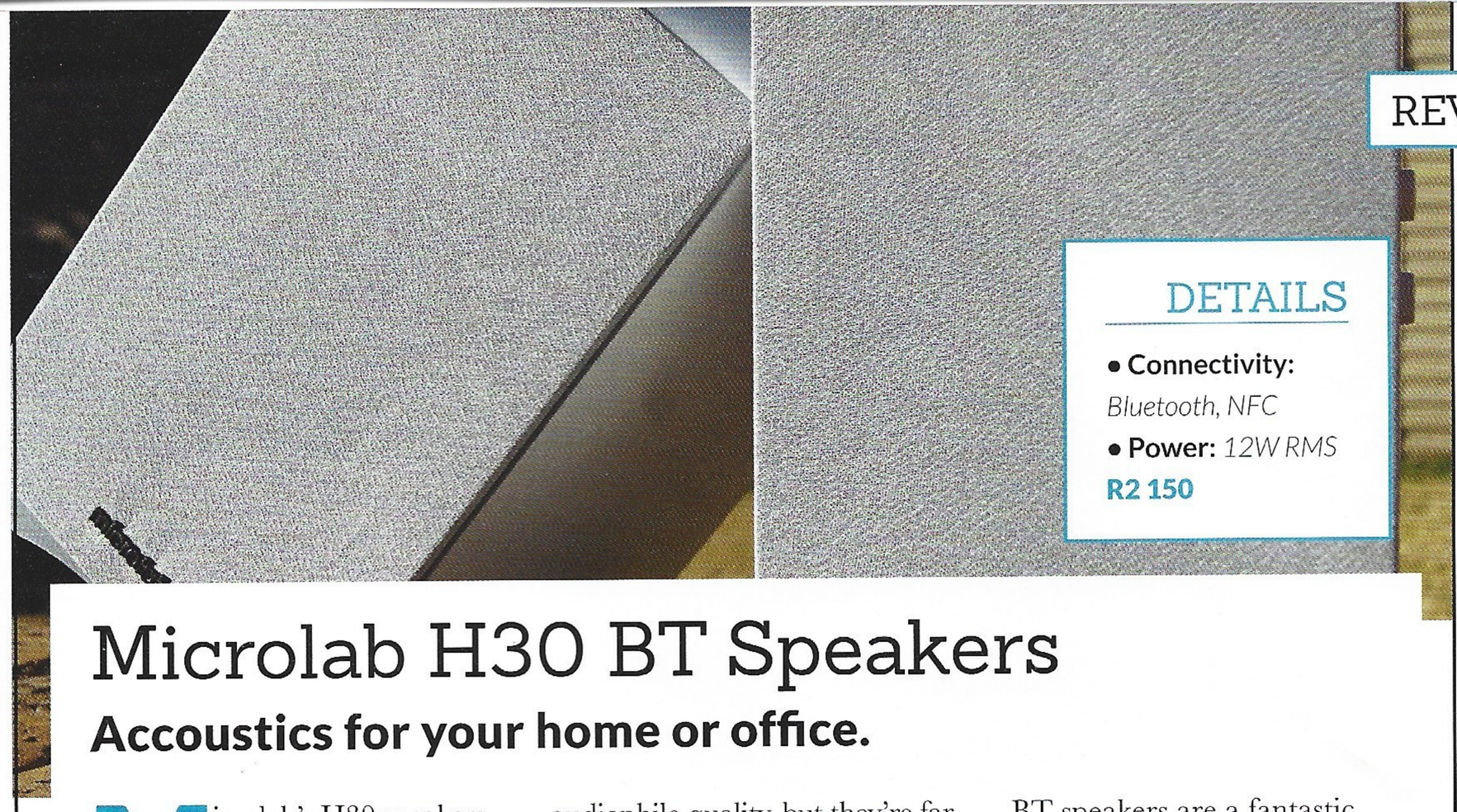
Should we have had any doubts that Sony was still serious about smartphones, they ended the minute we saw the specs of the Xperia Z2. The display is flanked by a pair of well concealed stereo speakers which are incredible when watching videos and produce great sound for a mobile phone. It has the latest in wireless communications standards including Bluetooth 4.0, 802.11ac WiFi and LTE to make sure that data flow in and out as quickly as possible. Then there is the return of Sony's incredible 20.7 megapixel camera sensor. However, it's the stupendously large 3 200mAh battery inside the Xperia Z2 that gives us the most to be excited about.

The Xperia Z2 runs on the latest version of Google's Android operating system. There are no buttons on the front of the phone which means that the home, menu and back buttons are all of the on-screen variety. As with all Android smartphones, Sony has added a host of applications to the Xperia Z2 that form part of the 'standard' Sony experience. The 'What's New' app brings the latest apps and games approved by Sony right to the front of the queue but annoyingly when you swipe up from the home button for Google Now you the shortcut to 'What's New' is presented as well. While we like the fact that a curated list of new apps to try is available, we don't think that it necessarily needs pride of place on the Xperia Z2 and would have much preferred to be able to customise the quick launch shortcut to something of our choosing.

As with previous Xperia Z1 smartphones the 20.7 megapixel camera in the Xperia Z2 is capable of some of the most fantastic images. The standard setting will keep images down to a more manageable 8 megapixels but will use the extra data that the lens captures to correct errors and beautify the pictures it produces using oversampling. The Superior Auto shooting mode should crank out pictures of a good enough standard to keep most happy, while the manual setting mode will give more room to play for those who know what they're doing. We cannot overestimate how much of an important role battery life plays in our decision on whether a smartphone is fantastic or a failure. In the case of the Xperia Z2 Sony have done everything right to offer the kind of battery life that will satisfy even the most hardcore smartphone user. Not only is the Xperia Z2 outfitted with an incredibly generous 3 200mAh battery but it also comes with an improved version of Sony's already impressive array of software controls that help you extend the battery life of your phone through the day. If ever Sony had created a handset worthy of praise the Xperia Z2 is most definitely it. Every single high end spec that could be present in a modern smartphone is present in the Xperia Z2 and it makes for a superb smartphone. Combine that with the immense battery life that the Xperia Z2 offers and we can honestly say that anyone buying the Xperia Z2 will be a happy smartphone owner.

SCORES

Design	9
Performance	10
Battery Life	10
Value for Money	9
Display	9
Interface	9
Overall	9



Microlab H30 BT Speakers

Accoustics for your home or office.

Microlab's H30 speakers look rather plain from the outset, the only real standout is the NFC tag on the top of one speaker. Connecting via NFC immediately pairs your smartphone to the speakers and starts streaming the audio that you're listening to on the phone to the speakers. It's the first time that NFC has made a tangible difference on any peripheral. Simply tap an NFC-enabled phone onto the top of the speakers and they'll pair and play any songs from your handset. They may not be audiophile quality, but they're far from terrible. The adjustable bass and treble let you set up the sound to the exact level that you want without sacrificing the overall volume.

If you're concerned about the lack of wires, sound quality through Bluetooth is as good as over a physical cable with music still streaming perfectly with the phone in another room charging while playing its music wirelessly. If you're looking for decent speakers for your entertainment/braai area outside then the Microlab H30 BT speakers are a fantastic option.

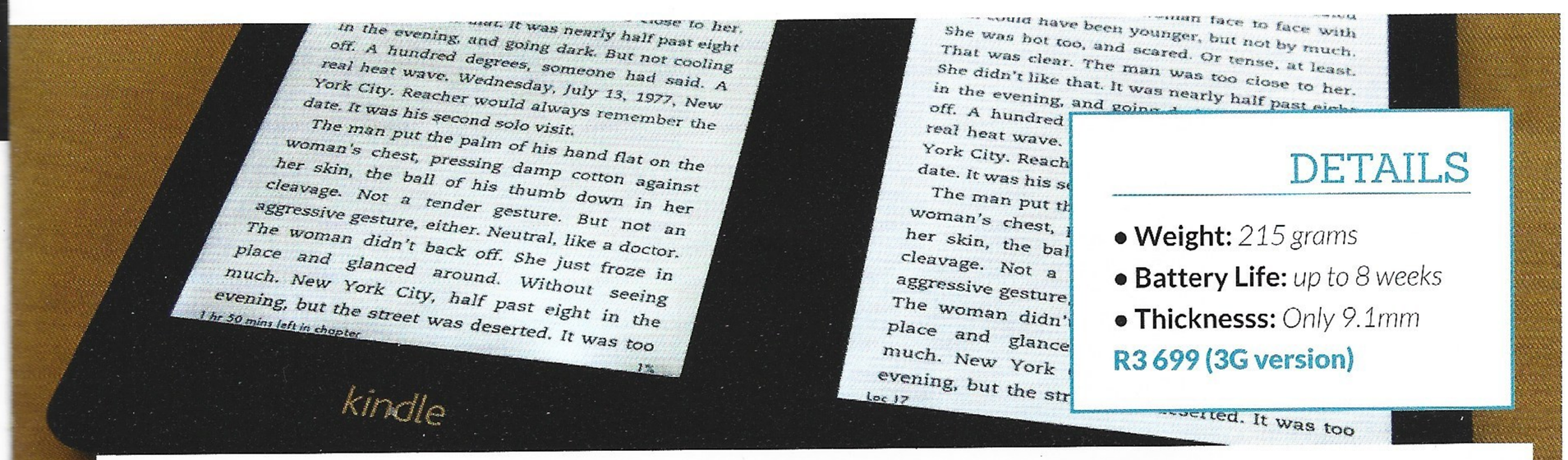
DETAILS

- **Connectivity:** *Bluetooth, NFC*
- **Power:** *12W RMS*

R2 150

SCORES

Design	6
Performance	7
Sound Quality	7
Value for Money	6
Ease of Use	7
Overall	7


in the evening, and going dark. But not cooling off. A hundred degrees, someone had said. A real heat wave. Wednesday, July 13, 1977, New York City. Reacher would always remember the date. It was his second solo visit.
The man put the palm of his hand flat on the woman's chest, pressing damp cotton against her skin, the ball of his thumb down in her cleavage. Not a tender gesture. But not an aggressive gesture, either. Neutral, like a doctor. The woman didn't back off. She just froze in place and glanced around. Without seeing much. New York City, half past eight in the evening, but the street was deserted. It was too
1 hr 50 mins left in chapter
1%
kindle

Amazon Kindle Paperwhite

Designed to deliver the best reading experience.

The new Kindle Paperwhite is much like the old Kindle Paperwhite. The only button to be found is the power button on the bottom of the Paperwhite sitting next to its microUSB charging port. And as with all Kindles, it's a lightweight reader weighing 205g for the WiFi version and 215g for the 3G version. The only real hardware improvement to speak of (outside of the display) is a new processor. It promises faster page turns and a better response to touch. The Paperwhite E-Ink display that the Kindle gets its name from has been improved over the original version and boasts greater contrast than the outgoing hardware which translates into a reading experience that's even easier on the eyes. The Paperwhite benefits from an immense battery life of up to eight weeks on a single charge due the fact that E-Ink displays only refresh when you turn the page unlike the LCD panels you would find in tablets. While the new hardware upgrades have definitely made the new Paperwhite into an even better product, they are nowhere near enough to justify an upgrade. That being said, if you are in the market for an ereader, there is no questioning the fact that this Kindle Paperwhite is the best available.

DETAILS

- **Weight:** *215 grams*
- **Battery Life:** *up to 8 weeks*
- **Thicknesss:** *Only 9.1mm*

R3 699 (3G version)

SCORES

Design	10
Performance	10
Display	10
Battery life	10
Value for Money	8
Overall	10

More news at htxt.africa

EA's Game Time allows gamers to try select games for free

EA has launched a programme called Origin Game Time where gamers get to play select games for 48 hours free of charge.
Bit.ly/1wlueg5

Harley-Davidson's electric motorcycle

Known as Project LiveWire, this is Harley Davidson's first foray into electric cycles and enthusiasts in the US will be able to take it for a spin next week.
Bit.ly/1pqDUnt

Are drones legal in South Africa: what the law really says

The CAA wasn't planning to ban drones, but there are laws allowing their use beyond recreational and sporting purposes.
Bit.ly/1iyBEK0

Your next Nokia ringtone could be made in SA

Nokia recently hosted the Sounds of the World project in Cape Town with students from the South African College of Music
Bit.ly/T2B2Ak

Wolfenstein: The New Order

The triumphant return of BJ Blazkowicz with a thrill ride that'll keep you engrossed all the way to the end.

DETAILS

- **Publisher:** *Besthesda Softworks*
- **Platforms:** *PC, PlayStation 4, Xbox One, PS3 and Xbox 360*
- **The Good:** *Beautiful, gory and fast-paced*
- **The Bad:** *A little on the short side*

From R599 for the PC version to R799 for next-gen consoles

Wolfenstein: The New Order is the game equivalent of a B-movie where the script isn't very polished, the acting is a little hammy and everything is so gloriously over the top that you can't help but enjoy it. The New Order explores the idea of what would have happened had the Nazis won World War II, and it's up to you, BJ Blazkowicz, to set things right. Wolfenstein puts a large arsenal of guns in your virtual hands that turn enemies into mince in the most graphic ways imaginable. Enemies gush with blood when shot, limbs fly in all directions and the occasional up-close view of a melee takedown doesn't shy away from violence. It's a very, very violent game that embraces rather than shies away from over-the-top gore.

There's a cool sliding mechanic that can be exploited to surprise enemies and, not to be outdone, this Wolfenstein lets you dual-wield every single one of your weapons. While it chews through ammo at twice the normal rate, it makes you super-effective by also doubling your bullet output, handy for some of the bigger enemies you'll face. In a clear break from previous 'stein games, there's also an attempt to attach a character onto your Nazi-murdering avatar. The game breaks up the action levels by introducing a home base of sorts, where BJ rests and gets to know his fellow resistance fighters between missions.

The characters of The New Order are more than just one-dimensional caricatures, too. BJ is no longer the cigar chewing all-American analogue of the past: now he's a haunted Jewish. His dark personality and gravelly monologues reflect upon the grittiness and ultimate hollow themes of war - a pointed counter to the taciturn chaingun-wielder of the past.

Wolfenstein's health mechanic, meanwhile, is as cheerfully artificial as ever and relies on health packs scattered around levels. There is also no automated cover mechanic either, so if you want to duck behind something for a bit of protection, you just have to position yourself in the right place and press the crouch key.

Wolfenstein looks beautiful and horrific and brings some intriguing new developments to the series. There are new depths to the game, but it's also very short. The single player campaign can be finished in ten hours or so. The single player game's shortness is all the more surprising because the developers didn't include a multiplayer module - The New Order is single-player only. The New Order is worth your cash without it, but as Return to Castle Wolfenstein was one of the best multiplayer FPSs ever, it does strike one as a little odd.

In the end, Wolfenstein is a really good shooter that fans of the original and its sequels should play. It's old-school enough to scratch that old Nazi-blasting, health-hoarding itch, but modern enough that it looks, plays and sounds as good as you'd expect a modern game to be. For an extended review go to **Bit.ly/1inNEsA**

SCORES

Graphics	9
Story Originality	8
Nazi-blasting Fun	9
Longevity	6
Value for Money	7
Overall	8

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UBISOFT'S HACK-EM-UP IS FINALLY HERE: WATCH_DOGS REVIEWED

Watch_Dogs is a stunning achievement by Ubisoft. It looks and sounds amazing, it's massive amounts of fun to play and there's so much to do.
Bit.ly/1hOtY6o

METAL GEAR SOLID: GROUND ZEROES REVIEWED

You may have heard that Metal Gear Solid: Ground Zeroes is a very short game. While that's true, don't let that put you off: like many things in life, there's more to it than meets the eye.
Bit.ly/RTJJN8

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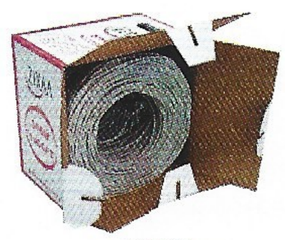
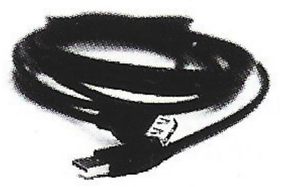
	5m	R 49
rca	stereo 3.5mm to 2 x RCA	R 29
	stereo to RCA female	R 20
UTP CAT5 crossover cable	1m	R 20
	2m	R 29
	3m	R 39
	5m	R 49
	10m	R 89
	20m	R 139
	30m	R 199
UTP CAT5 straight cable	1m	R 20
	2m	R 29
	3m	R 39
	5m	R 49
	10m	R 89
	20m	R 139
	30m	R 199
Network cable	CAT5 solid box 305m	R 729
	CAT6 solid box 305m	R 899
DVI cable	2m	R 99
	3m	R 119
	5m	R 159
HDMI cable	2m	R 79
	3m	R 99
	5m	R 159
USB extension cable	2m	R 39
	3m	R 59
	5m	R 79
VGA cable Male to male	2m	R 59
	3m	R 79
	5m	R 99
	10m	R 189
	20m	R 389
	30m	R 549
Male to female	2m	R 59
	5m	R 99





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Spintires

Stuck in the mud in Moscow? All you need is a winch and some multiplayer trucking support.

DETAILS

- **Size:** *595MB*
- **Platforms:** *PC*
- **The good:** *Mud*
- **The bad:** *Mud*

Available on Steam for $29.99 (around R330)

It would be somewhat inaccurate to call Spintires a game — it's more of a simulation that aims to improve your driving technique through the thickest mud and harshest terrains possible.

In short, Spintires supplies you with a number of soviet-era heavy-duty vehicles, and it is up to you to drive, ram and skilfully-navigate the treacherous terrain in order to complete your objective.

The premise for the game is actually quite simple: haul some lumber from one point of the map to another. Each of the five or so maps has at least one Lumber marker, where the wood is stored, and one Objective marker, where the lumber needs to be dropped off. But there is a bit of a twist – a large portion of the map is "cloaked", meaning that you won't be able to see which roads will lead you to other garages or vehicles, or whether they will lead you off a cliff, making it a bit of a guessing game in the beginning. To de-cloak the map, you have to take a vehicle – preferably one of the smaller ones as they're easier to drive - and set a course through the jungle. By getting within the radius of the cloak point, the blackout will be removed, and you will get a better picture of your surroundings via the map.

Spintires also has a full day-night cycle, so if getting stuck in broad daylight wasn't difficult enough, the darkness will make it just that much more frustrating. At least each vehicle has a decent set of headlights, which really does come in handy as they light up the landscape magnificently.

Each map has about five or six different vehicles available across five classes, with the A-class vehicles being the scout jeeps, and E-class vehicles the extra heavy-duty lifters complete with three axles and eight wheels each.

Starting at the base garage, you will have to equip a suitable vehicle with a Garage Carriage, which contains repair points and two garage points. It takes four garage points to unlock a garage for use, so you will have to drive back and forth to unlock it if you're playing on your own.

The mud and water physics are incredibly well done, but you will find out pretty soon just how sticky the situation can become. By using some clever design tactics, the in-game mud will react nearly identically to how it would in real life: Bodies of water can be equally misleading, as there is no way of telling the depth of the pond, river or lake you're about to drive through, although tell-tale signs do give away where the shallow water is, at least. With each vehicle having a different height and ground clearance, they will be able to go through different depths of water without being damaged. Try your luck with small Jeep and a fast-moving river, and you'll soon need rescuing. But becoming stuck isn't the end of the world – it's actually one of the game's biggest selling points. Isolated and alone, the best thing you can do is to find and latch onto a nearby tree and winch yourself out.

If one of your trucks or that of another player becomes stuck, you can try to pull it out with another truck and a winch.

Spintires is a great game to play alone or with friends. It's joyfully frustrating, but there is definitely a sense of pure torque that will see you going back for more – even if it is just to give it "one more go".

SCORES

Truck Variety	8
Mud Physics	9
Graphics	8
Longevity	6
Value for Money	7
Overall	8

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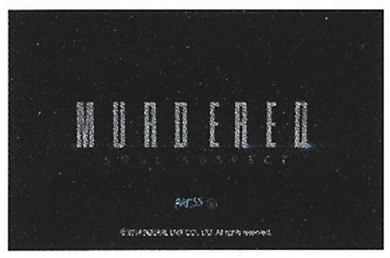
MURDERED: SOUL SUSPECT – A 'SOLVE YOUR OWN HOMICIDE' ADVENTURE



A fantastic piece of interactive digital fiction that lovers of great stories will thoroughly enjoy. Gamers? Not so much.
Bit.ly/T2x5vm

PROFESSOR LAYTON VS. ACE ATTORNEY: PHOENIX WRIGHT

Labyrinthia is a weird place, but well worth a visit to see two top Nintendo gaming heroes tackling a 3DS adventure together.
Bit.ly/1m3JV3G

Amazing Spider-Man 2

Oh no Peter Parker! Inconsistent camera angles, sticky controls and mixed graphical capabilities.

To coincide with the release of The Amazing Spider-Man 2 film, the multiplatform action-adventure video game is here. Players take on the titular role of Peter Parker as he (naturally) has to save New York City from the evils of some mean-spirited gangsters. After web swinging around for a couple of missions, Parker is contacted by Kraven the Hunter, who claims that he will be able to assist making him a better tracker of bad guys. That sets up the rest of the title where Spider-Man gets to fight Russian mobsters, battle Black Cat and a creep called Kingpin. Taking on the same control scheme as the previous Amazing Spider-Man title, not much has changed. A new web-slinging mechanic has been introduced, but instead of being easier, players will now be questioned by Spider-Man about their aiming proficiency. And while the adventure centres on the usually-good Spider-Man, gamers also have the choice of being completely villainous. The Amazing Spider-Man 2 could have been a really cool game, if the implementation was handled a little bit better. Spider-Man usually does all the saving, but beautiful cityscapes are unfortunately not enough to save Spider-Man himself. For even more on the game, go to **Bit.ly/TJm9nv**

DETAILS

- **Platforms:** *Microsoft Windows, Nintendo 3DS, PlayStation 3, PlayStation 4, Wii U, Xbox 360, Xbox One*

From R499

SCORES

Presentation	7
Fun	6
Story	6
Longevity	7
Value for Money	7
Overall	7

Pixel Boy and the Ever Expanding Dungeon

The charm of old-school arcade action with modern-day RPG sensibilities.

Pixel Boy is a top-down shooter that brings in elements from old-school arcade games and action RPGs. Your challenge is to navigate a series of randomised dungeons, collecting three key fragments that unlock the next level while dodging and shooting enemies. Boss fights are tough, but fair, and while it takes a bit of effort to learn their patterns in order to out-manoeuvre them, doing so successfully is incredibly satisfying. Dungeons are populated with enemies that must be killed by Pixel Boy's attack. Some of them come after him while others move around in random patterns. Fortunately Pixel Boy has a regenerating shield that can be deployed.

Pixel Boy also has a bit of a story: enemies drop coins and power-ups and there's a crafting sub-game that lets you combine the power-ups you collect to give Pixel Boy's "gun" all kinds of abilities. As well as tooling up your gun, you can also make armour. There really is a lot of underlying detail making Pixel Boy more than the simple arcade shooter it appears to be at first glance. It's tough but fun, with enough nods to modern game design to keep it feeling retro, but fresh. For an extended review, go to **Bit.ly/1hIhFYY**

DETAILS

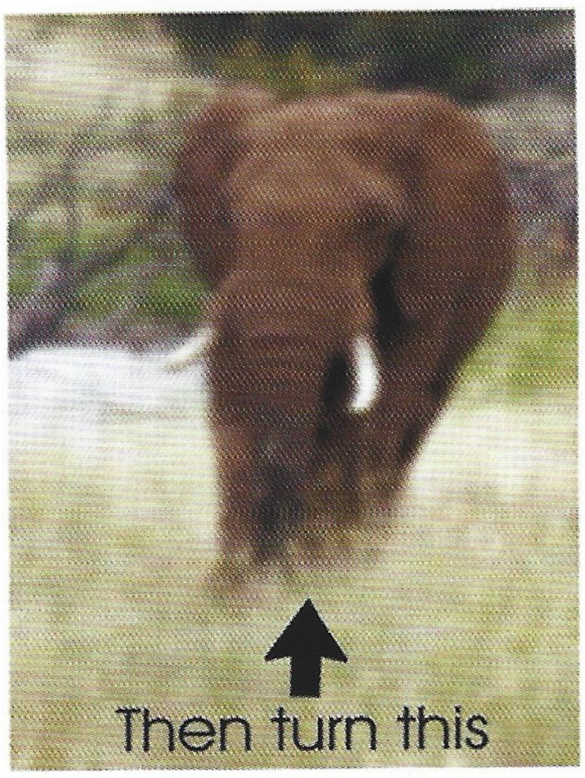
- **Platform:** *PC*

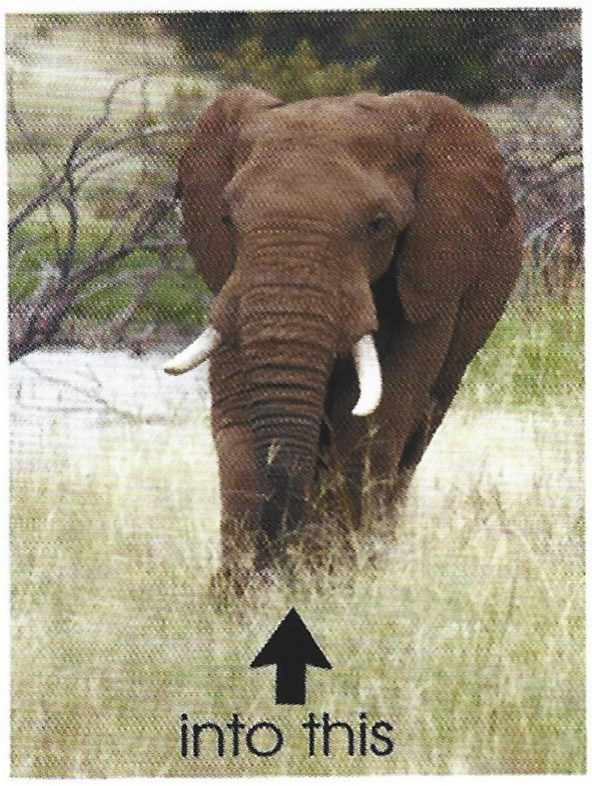
$9.99 on Steam

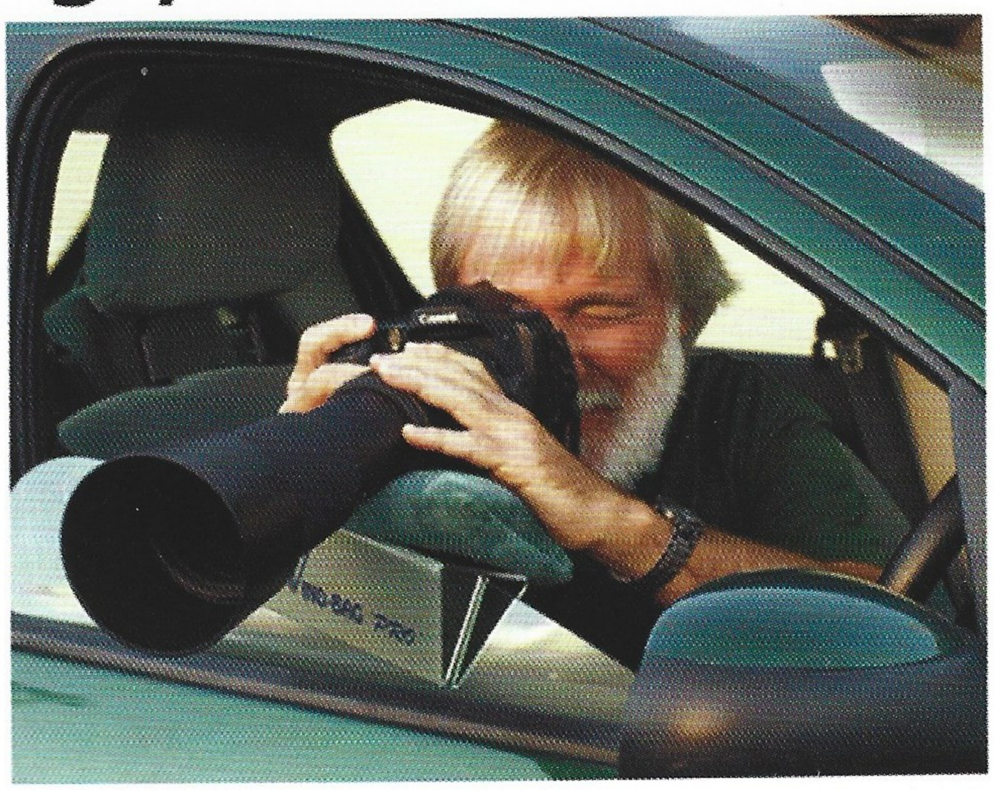
SCORES

Graphics	7
Soundtrack	9
Challenge	9
Depth	8
Value for Money	10
Overall	9

Wildlife photography giving you the shakes?







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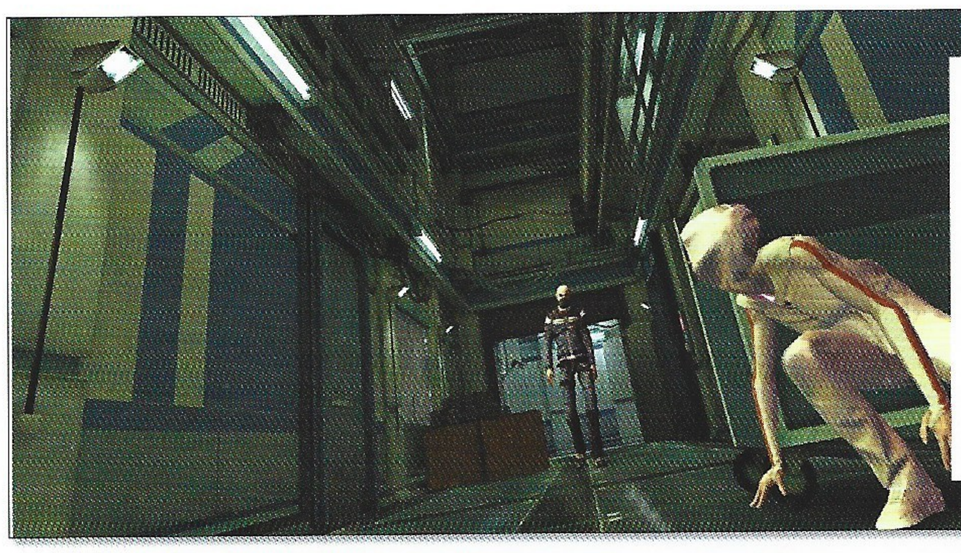
5 top games for your tablet

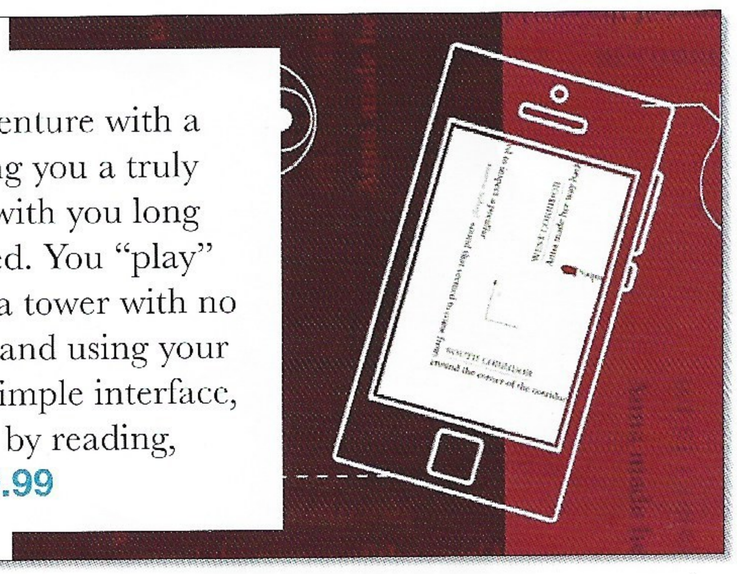
Mobile games have the potential to keep you occupied for hours on end, or just for a few minutes at a time.



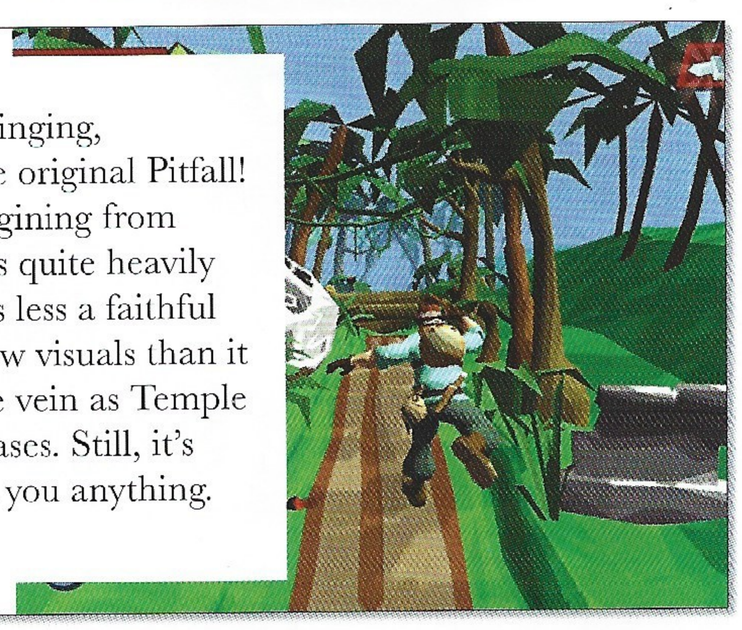
RÉPUBLIQUE (iOS)
A young woman, Faith, is trapped inside an unnamed totalitarian state that's wired to the hilt with cameras and surveillance equipment, and it's up to you to hack into those systems remotely and guide her to freedom. Faith's journey to freedom consists of five nail-biting episodes that combine voyeurism with stealth mechanics and survival horror elements to create a truly unique game for iPhones and iPads.
First episode free, then R59.99 each or R189.99 for all five episodes

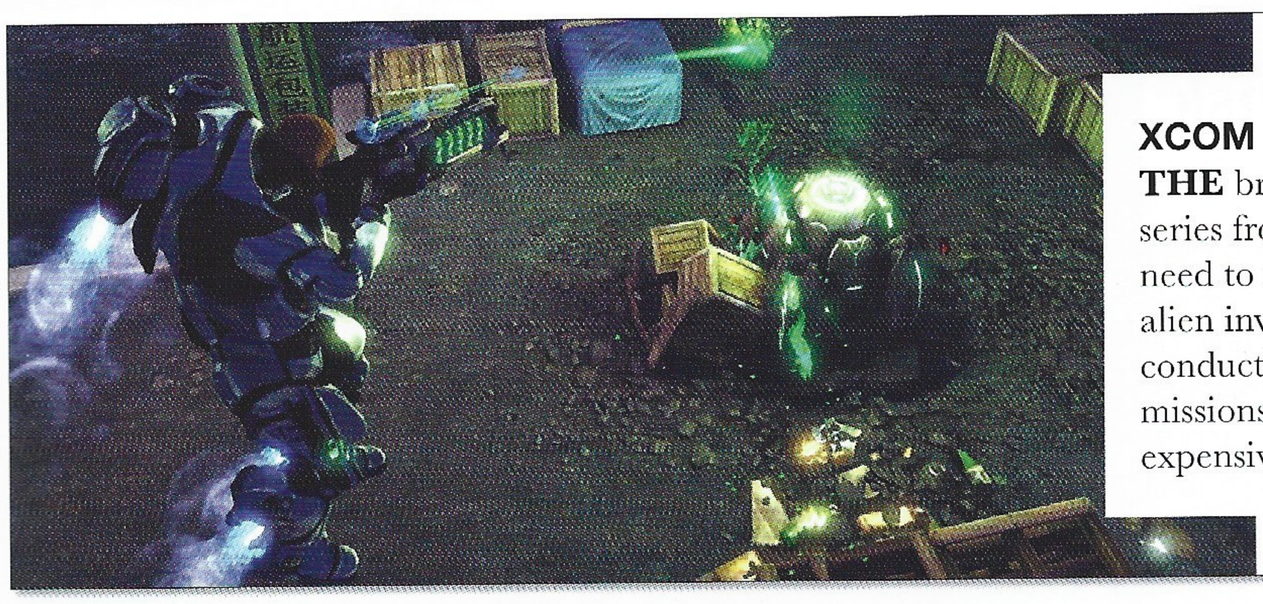
KIWANUKA (iOS/Android)
KIWANUKA is a puzzler with Lemmings-esque gameplay that will slowly absorb you into its strange little world. Kiwanuka is beautiful, colourful, simple and challenging, all at the same time. You have one goal – to guide the lost citizens (let's call them Kiwanukans?) to freedom. But first, you'll have to save them from triangular prisons by controlling a magic staff which points a magic path of lightning. It sounds kinda weird... and it is. **R24.99**

DEVICE 6 (iOS)
DEVICE 6 blends text-based adventure with a novella with a puzzle game to bring you a truly one-of-a-kind game that will stay with you long after the last puzzle has been solved. You "play" Anna, a woman who wakes up in a tower with no recollection of how she got there, and using your smarts and the game's brilliantly simple interface, you must find out what's going on by reading, listening and solving puzzles. **R49.99**



PITFALL! (iOS/Android)
THE classic pit-jumping, rope-swinging, crocodile-avoiding action from the original Pitfall! is back in this modern-day re-imagining from Activision. Sort of. Pitfall! borrows quite heavily from modern mobile games and is less a faithful adaptation of the original with new visuals than it is an "endless runner" in the same vein as Temple Run, complete with in-app purchases. Still, it's quite fun and doesn't have to cost you anything.
Free with in-app purchases





XCOM ENEMY UNKNOWN (iOS/Android)
THE brilliant re-imagining of the classic XCOM turn-based series from the 90s has come to iPads and iPhones. You'll need to use your tactical brain and management skills to repel alien invaders by managing your base, recruiting soldiers and conducting research in between nail-biting turn-based combat missions that pit your soldiers against the aliens. XCOM is expensive, but worth every cent. **R119.99**

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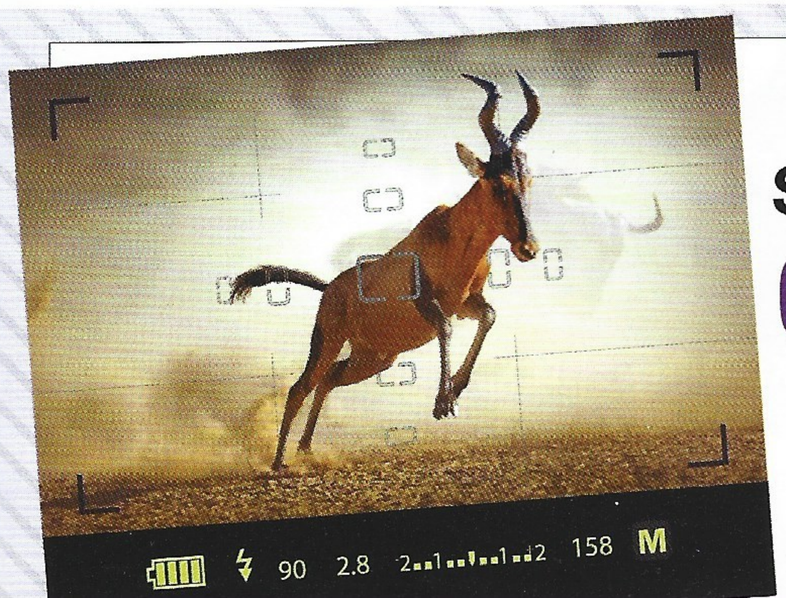
Store photos online with Canon's new digital archive

Looking for somewhere to store your precious photos online other than Picasa or Flickr? Just in case there aren't enough ways to share photos online already, digital camera manufacturer Canon has created its own cloud-based photography depository. By signing up to Irista, you will be able to upload images from the web, the desktop app or pull in images from Facebook and Flickr. But the service isn't limited to users of Canon cameras, as it supports a range of camera brands, models, sites and file types.

"Irista is the perfect place to find inspiration and enhance your skills. With all your images in one place, you can view, compare and assess them with ease; this will help you become a better photographer," the site explains. And what is even better news, is that there is no limit on the file sizes, however, a free account only allows you to upload 10GB of images. They do have two other storage options, giving you 50GB of space for €4.99 per month, while the Premium package gives you 100GB of storage for €10.99 per month.

The site supports any file type from JPEG to RAW, allows you to share images from Irista to social networks, and a host of organising tools to sort through the clutter, like tagging people in images, and adding keywords.



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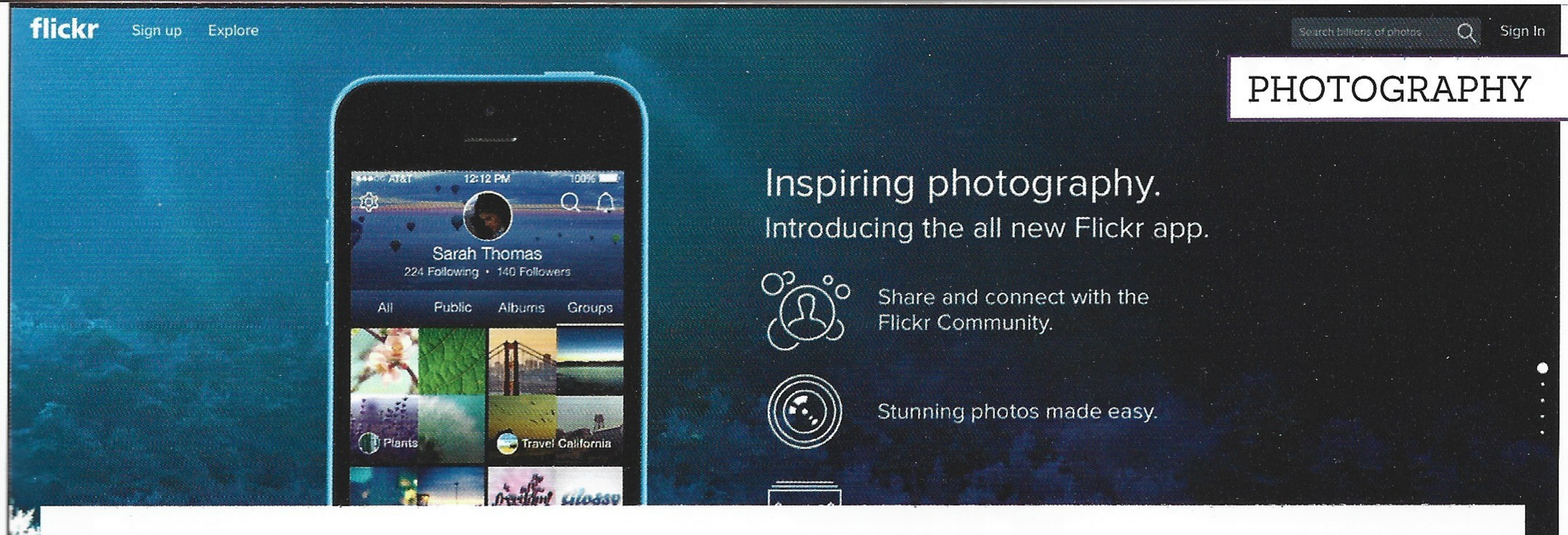


Flickr removes Facebook and Google login

Photo sharing website Flickr, which is used by many photographers as a simple way to showcase their work, plans to discontinue the use of Facebook and Google profiles for logging into the site. Flickr, which was acquired by Yahoo in 2005 for an estimated $35 million (R375 million) was reported to have approximately 87 million registered members and more than 3.5 million new images uploaded daily in March last year.

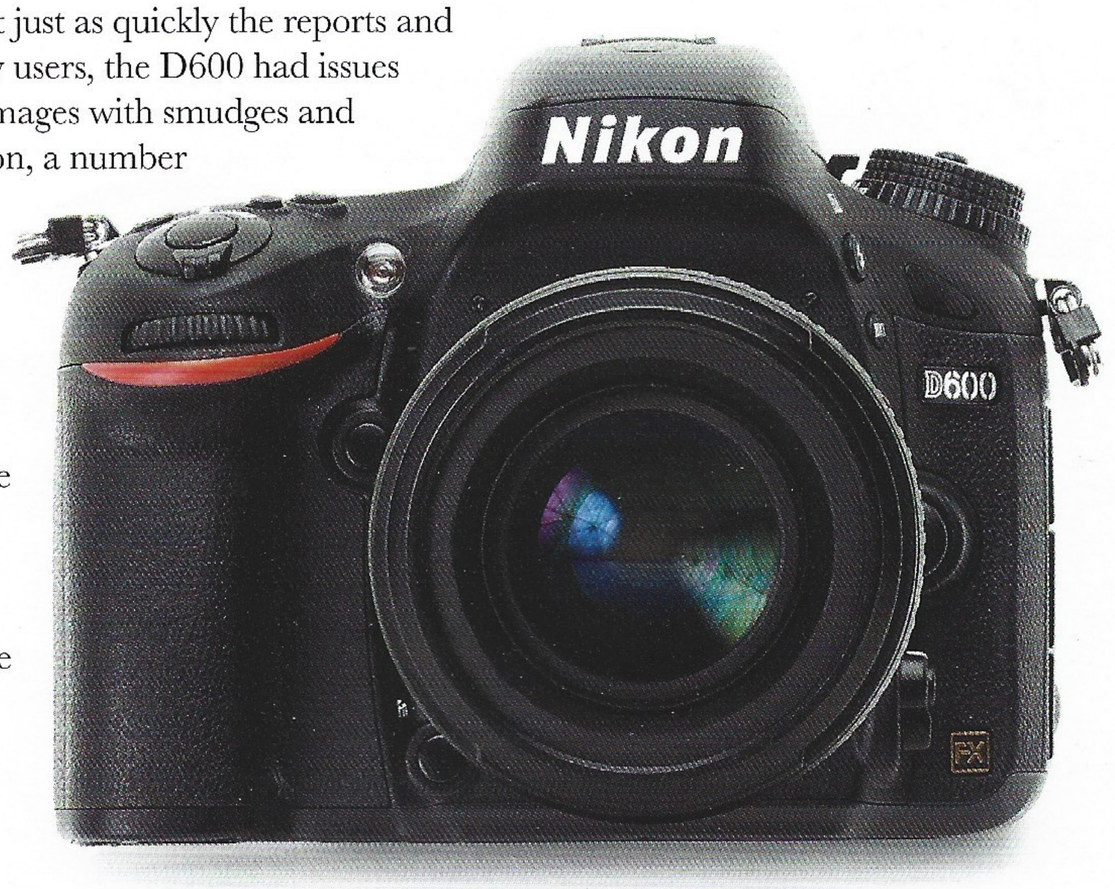
"Starting this month, we will be requesting that everyone use a Yahoo username and password to sign in to Flickr. Eventually, Facebook and Google sign in will be removed," Flickr's head of product Markus Spiering said in a help forum post.

Spiering explained that users will have to create a Yahoo profile to login if they don't already have one. "Over the next few weeks, if you have been logging in with Facebook and Google IDs, you will be prompted to create a Yahoo username and password when you access your Flickr account. If you already have a Yahoo account, you will be reminded and prompted to use those log-in details."

The post also said that users can expect a "Streamlined sign-in experience, dedicated service and the same great Flickr" when switching over to the new login process although that may be further off than Yahoo is willing to admit citing the fact that the company's engineers are busy fixing an error which still shows users as signed in via Google or Facebook even after they have set up a Yahoo account. Yahoo did not give a reason for the transition to using Yahoo IDs only but we suspect that it's part of Yahoo's CEO, Marissa Meyer's efforts to bring Yahoo's brand out of the shadow of companies like Facebook and Google. Meyer has already bought sites like Tumblr which she hopes will bring a younger audience into the Yahoo brand and is using popular Yahoo-owned sites like Flickr as a way to rejuvenate the ailing company's image.

D600 faults cost Nikon nearly R190m to fix

Nikon released its D600 digital SLR model in March this year, but just as quickly the reports and complaints started to flood in of faulty parts. According to many users, the D600 had issues that allowed oil and dust to build up on the sensor, resulting in images with smudges and marks on them. Users were so outraged by Nikon's lack of communication, a number of law firms have filed suits against the company on behalf of irate photographers.



"Nikon did not identify the cause for the debris buildup on the D600 sensor, nor acknowledge, as many consumers have alleged, that this is a widespread problem with the camera. To eliminate the unwanted and distracting spots in their photos, D600 owners have had to repeatedly send the camera to service technicians for cleaning at great inconvenience and cost," a filing from law firm Lieff Cabraser Heimann & Bernstein states. After the furore and many court room filings later, Nikon over the weekend admitted that there is a problem with the units and set $17.7 million aside to address it. The company added that they aren't taking the complaints lightly, and realise that it could damage Nikon's reputation.

"We are taking this matter very seriously, and we will continue to offer users of the D600 a special service and, while we will be taking steps to restore confidence in the Nikon brand."

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WHICH IS THE BEST...

Underwater camera?

We put three tough waterproof snappers to the test to see which one is the best pick for you.

Underwater photography has become one of the most fun photographic categories, as you're never quite sure what to expect and the results are often brightly spectacular.

It's also a rather lucrative business, considering that we know more about space than what we do about earth's oceans. Many photographers have made a name for themselves by taking pictures of aquatic life, and in the process won acclaim for their efforts – which means there is no reason that you shouldn't be able to take stunning images as well.

We've rounded up three underwater cameras to pit against each other, to see which one delivers the best.

FUJIFILM XP70

FUNKY LOOKS... AND PERFORMANCE TO MATCH.

With its brightly coloured tough plastic body, Fujifilms new XP70 looks and feels more like a robust piece of diving gear than any of the other cameras on test here. It looks like an underwater camera, the kind of thing Jacques Cousteau would have in his dive bag, and there's a range of bolt on accessories — like a wide angle lens — as well.

HANDLING

Bulky but not overbearing, the XP70 will fit firmly into your hands – and it should, as you won't be able to afford a slippery moment when taking pictures of Nemo and his friends. The video record, power and shoot buttons are all located in the top of the housing. The rest of the control options are located on the back of the camera, and here you will be able to go into the menus, replay your images and zoom in or out. There is also a loop to attach a strap, so that you can let go whenever the need arise.

IMAGE QUALITY

The XP70 features a 16-megapixel CMOS sensor with primary colour filter, so you know that it will take better images than most smartphones on the market. Its ISO sensitivity can go up to 6 400, features a wealth of shooting modes and has a lens focal length equivalent to 28-140mm on a 35mm format camera. At its largest, the highest resolution images can go up to 4 608x3 456 with a 4:3 aspect ratio, while the smallest images can be 1 728x1 728 in resolution. To take a 360-degree view of the awesomeness that you are seeing, there are three panorama modes: 360, 180, and 120-degrees. While the five times optical zoom and a 10-times digital zoom doesn't sound that impressive, it will make a huge difference when underwater, as little critters are sometimes very difficult to get close to.

PERFORMANCE

It's designed for fairly strenuous underwater activity, and is waterproof down to 10m (about 33 feet) –not as good as some but pretty good if you are snorkelling along the coast or doing a spot of scuba diving. It is also shockproof from a maximum height of 1.5m, and can operate effectively even if the water temperature drops to -10°C. It's hard to brace yourself for low-light sub-aqua shooting too, which is why it's good news that the XP70 has a decent image stabilisation system that moves the CMOS sensor to compensate for motion.

Against its rivals here, the XP70 is notably not suited to the same depths and lacks some features like the built-in GPS. But it is R1 000 cheaper – and that's a lot of cash.

KEY FEATURES

- **Advanced filter applicable to movies and images**
- **2.7-inch TFT colour LCD monitor**
- **5x optical zoom lens**
- **16 megapixel CMOS Sensor and optical image stabilization**
- **Wireless image transfer for file sharing**

R2 300

SCORES

Handling	8
Image Quality	8
Performance	8
Value	8
Overall	8

OLYMPUS TG-2

DURABLE AND STURDY, THIS ONE IS BUILT FOR EXTRA-TOUGH CONDITIONS.

Olympus has been in the camera business for a while now, so any model that they bring out is sure to be of the highest quality. The TG-2 is one of their toughest waterproof cameras, not only because the company says so… it's written on the front as well! With looks of a traditional compact camera, the TG-2 functions great outside the water just as it does within.

HANDLING

Being a compact camera, it fits easily in a pocket and is ready to go. There is also an update to this model – the TG-3 – which we haven't reviewed yet. With all the necessary buttons located on the back of the model, it is very easy to get to all the functions with having to dig through the menus. The zoom buttons are situated on a rocker, making it easy to operate. The only problems

CANON POWERSHOT D30

SMALL YET POWERFUL, CANON GETS THE JOB DONE.

Canon is arguably one of the best camera makers around, so any product that bears their distinct silver logo should rightfully fall into the same category. But underwater cameras are a whole different niche, and it's not exactly an everyday product. So, how does the reputable camera manufacturer's underwater offering stack up against the competition?

HANDLING

Slightly bigger than the Fujifilm XP70, the PowerShot D30 fits perfectly in your hand. Two rubberised sections on the front and rear of the camera will prevent it from slipping out of your hand, although you will be underwater when using it. In the default holding position the zoom buttons are easily accessible with a thumb, while the other functions are reachable by a slight manoeuvre. The D30's menu system is fairly easy to work out, and houses all the settings and features that one would come to expect from such a model – simple, yet packed with functionality.

IMAGE QUALITY

The camera packs a 12.1-megapixel High-Sensitivity CMOS sensor, and when it is combined with the company's DIGIC 4 Image Processor creates the Canon HS SYSTEM – which provides the settings for low-light photography. This comes in real handy when exploring crevasses, caves or shipwrecks. Just in case you aren't able to get close enough to your subjects, it has a 5x optical zoom with 28mm wide angle and a 10x digital zoom. Digital zoom isn't always the best thing for photography as they are prone to contain more grain, but luckily it can also be switched off. In the event that you are able to spot a sea worm, the D30 has an underwater macro mode as well.

PERFORMANCE

Canon claims that the D30 is the world's deepest waterproof camera, as it can hold its own (or breathe) up to 25 meters – that is a long way down. All the action is viewed through the 3.0-inch PureColor System LCD screen, and the D30 has a Sunlight LCD mode built in, so that the monitor will be easily readable even in glaring sun. It takes a slight bit longer than the Fujifilm to be operational, but at least there are no settings that need to be set before snapping away. The built-in GPS will allow you to retrace your steps or plot the course you swam, as it's always nice to overlay your images on an oceanographic map.

KEY FEATURES

- World's deepest waterproof camera
- 12.1-megapixel high-sensitivity CMOS sensor
- 3.0-inch PureColor system LCD screen
- Underwater macro mode
- 5x optical zoom with 28mm wide angle

R3 300

SCORES

Handling	8
Image Quality	8
Performance	8
Value	8
Overall	**8**

CANON POWERSHOT D30

SMALL YET POWERFUL, CANON GETS THE JOB DONE.

with the buttons are that the Info, Delete and Scroll keys are on a weird flower-type button structure, which can be a bit tricky to manoeuvre. When you press the power button, the camera will spring to life in a very short span of time, so that it is ready to take the shot even before you are.

IMAGE QUALITY

The TG-2 features a 12-megapixel BSI CMOS sensor and TruePic VI image processor – low light is no problem for the maximum aperture of F2.0. For those with a little bit more know-how of what is going on, it has an A Priority Mode so that you can manually set the aperture as desired to get the right mood and setting, as well as take some action blurring shots.

PERFORMANCE

Waterproof, shockproof, freezeproof and crushproof, the TG-2 is really the workman's camera in terms of underwater snaps. It is capable of recording movies at full high definition at an astonishing 240 frames per second. Unlike other underwater cameras, the TG-2 features a Microscope Mode for when you want to get really close to the coral reefs or sea urchins - the mode effectively boosts the zoom to 200mm (on a 35mm equivalent). Just in case you want to know where you have been or would like to retrace your steps, it also has a GPS and e.compass built in that records where you have been.

KEY FEATURES

- Rugged body built for tough conditions
- Image stabilisation
- OLED display for easy viewfinder
- 12-Megapixel BSI CMOS sensor and TruePic VI image processor
- Waterproof, shockproof, freezeproof and crushproof

R3 300

SCORES

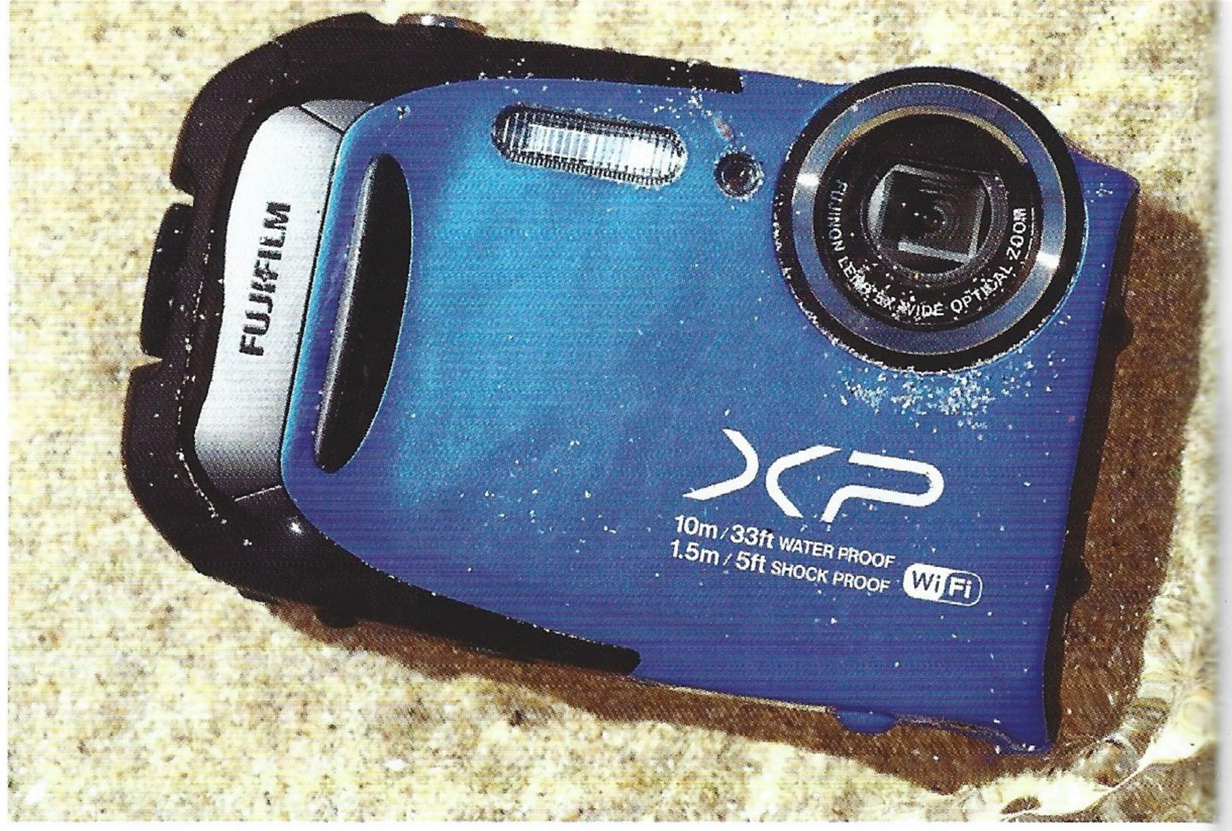
Handling	7
Image Quality	7
Performance	8
Value	6
Overall	**7**

CONCLUSION

This has been one of the toughest supertests for us to do. All three cameras performed exceptionally well, but as usual there can only be one winner. The Canon D30 is definitely the model that takes the better quality images, above ground as well as in the water, but it has a number of inhibiting factors that could prevent you from purchasing it.

The casing of the D30 is metallic, and after a number of dives it could become dented, scratched or damaged. This is where the Fujifilm XP70 shines – its casing is made from durable plastic. It is a far better material to make an underwater camera with, as you wouldn't have to worry if it slips out your hand and takes a tumble down to the coral reef.

Then there is also the issue of price. While it does take better images, the D30's price tag is a bit steep as one of only two



underwater cameras from Canon. The XP70 is a full R1 000 cheaper, and while it has fewer features – no GPS, shallower waterproofing – the price is the deciding factor..

So this month's winner is the XP70. With the extra money that you save from buying a cheaper model, you could get some of Fujifilm's underwater accessories like the Finepix Action Camera Lens.

EDITOR'S CHOICE
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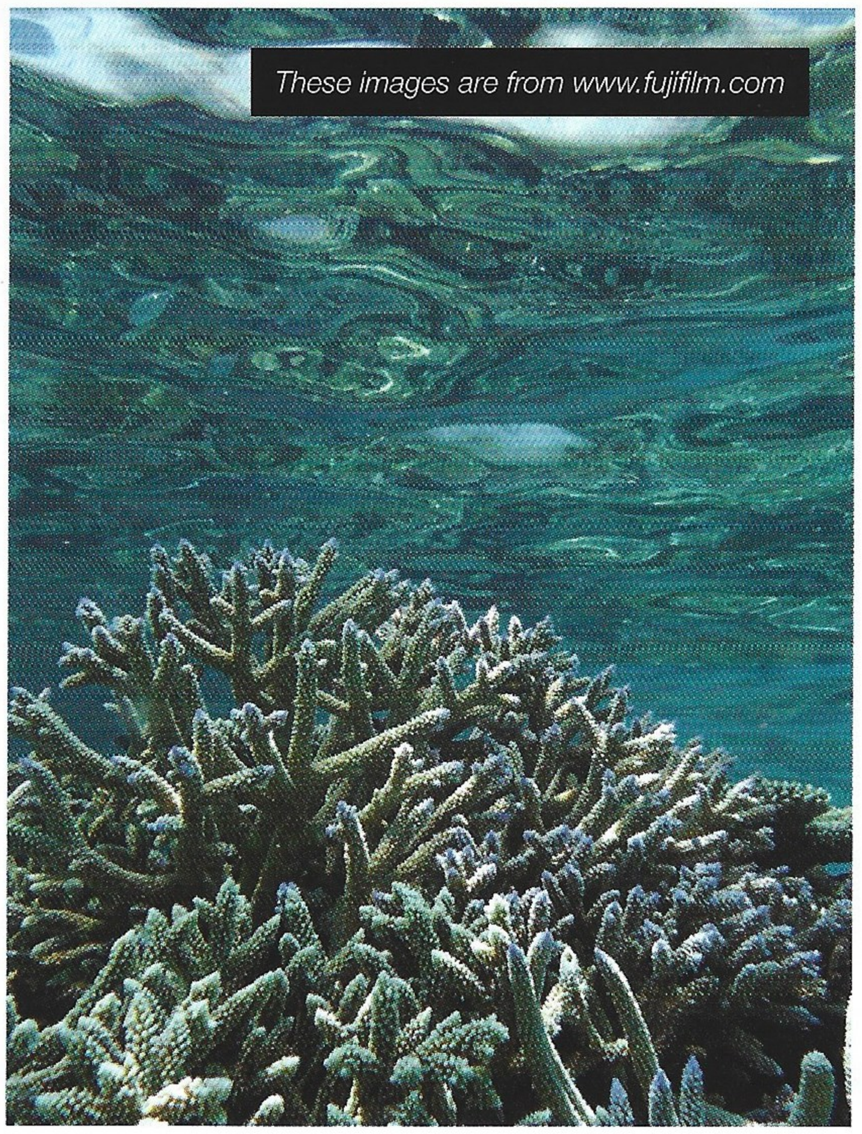
These images are from www.fujifilm.com



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How a digital camera sensor works

Taking a photo is easy, but there is so much that goes on behind the scenes and inside your camera.

While the lens could be seen as one of the most important parts, the sensor that is tucked away inside the body is where the actual magic happens. The sensor is the piece of technology that captures the image and ensures that the colours come out just the way they are intended. There are two different types of sensors: Charge-Coupled Device (CCD) and Complementary Metal-Oxide Semiconductor (CMOS), and while both perform the same function, they works in different ways. The CCD sensor is old technology and is in the process of being phased out by major camera manufacturers, while CMOS has been more prominent over the last couple of years.

Both pieces convert light into electrons, and the easiest way to think about camera sensors are to imagine them as millions of solar cells packed onto a small electronics board – just waiting to receive light information. The vital sensor is made up of three different layers: the sensor substrate, the Bayer filter, and a microlens. The sensor substrate measures light intensity and is made from a silicon material. If you were to look at a sensor real close, you would notice that it each pixel almost looks like a well or a bucket. Light travels towards the sensor, and is trapped in each tiny bucket which is measured by the Bayer filter.

Since the sensor can theoretically only record light in monochrome, the filter is bonded over it to allow only light photons of a certain colour into each pixel, or bucket. The filter looks like a chessboard consisting of green, blue and red pixels, with twice the number of green pixels than other colours. The sensor is able to calculate how much light and intensity goes where in the image, and starts to formulate the photo using the information provided. Each pixel and its colour value will start to make up the photograph, until the completed image is created.

The microlens also plays a vital part in preserving the colours for the sensor. Between each pixel there are tiny gaps, and if light fall on to them they are wasted. Microlenses are placed within these gaps and direct the wasted light back onto the main pixels for capture. If you have been following as to how a sensor works, you would have noticed that the sensor only captures three colours. But how is it possible then for a full-colour image to be produced? As if through magic, the clever folks who make the cameras have worked some algorithms into the camera (called demosaicing) that works out the colour spectrum for each pixel.

To complicate things a bit further, the full-colour of a picture is achieved by grouping four pixels (2x2) together as one unit, so that the camera can estimate the colour levels from the one red, one blue and two green pixels. Speaking of pixels, you might have seen the term Effective Pixels written on the side of a camera box. Taking the grouping of four pixels into account, the pixels on the outer edges of the sensor don't have any pixels to be paired with – so their data isn't as accurate as the rest. So effective pixels are the amount of pixels that can be grouped together to produce the full-colour image, while actual pixels are the total number of pixels on the sensor, regardless of their placing.

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Freeze Frame: how to take great action shots

Capturing high-speed objects frozen in time can make for some stunning photos, and we'll explain just how to get them below.

SELECTING YOUR SUBJECT

The best subjects for this category are objects that are moving at a fast pace with a lot of emotion or drama. Pets running after a ball, motocross riders jumping over a dirt mound while doing tricks or motorcars whizzing by in a busy city street will generally provide the grounds for a great shot.

SETTING UP THE SHOT

There is no use in waiting for a cricketer to bowl a ball if you have no idea at which end his is starting. A little bit of pre-planning will go a long way in ensure the mood is correctly captured. Anticipate movement in a certain direction, or set up the camera where you are confident a skateboarder will come by. It is also worth checking out the background and lighting before you take any pictures. A great shot can quickly be ruined if the background doesn't compliment the foreground.

FREEZING THE ACTION

Once you have your subject in mind and set up at the desired location, take some time to consider what type of shot you are after. Freezing the action is a great way to capture objects in mid-air, mid-stride or mid-jump without blurring the image. For this, you will need to set up your camera to make use of a fast shutter speed, something in line with 1/1000 or 1/2000. If the image comes out too dark, try adjusting the f/stop to open wider so that more light will be let in, like f2.8 or f4.

BLURRING THE ACTION

If you want to give the subject the illusion of movement, then blurring the subject will be your best bet. In doing so, a portion of the subject will remain in focus, while other parts will be blurred – creating the motion-blur effect. It's great to illustrate how fast something is moving, but that also creates a problem. By using a slower shutter speed (in the region of about 1/250 or 1/500), you will have to pan in the same direction as the movement. That way the camera will still capture the object in sharp detail, while blurring out everything else that wasn't moving. It's a good idea to track your subject first before taking the initial shots. Remember to put the camera on burst mode, otherwise you'll end up with just one photo, and possibly a missed opportunity.

WATER

Water in all its flowing glory might seem like a daunting task for any photographer. We have all seen the images where a waterfall looks like a veil of silk running off a high ledge, but if you follow the same principles detailed, you shouldn't have any issues. Deciding on whether to freeze the water in mid-fall, or blurring it will come into question, but for the silky effect blurring is the one. But instead of panning your camera, just use a slow shutter and take the image from a stable vantage point – or make use of a steady tripod.

PATIENCE

Getting the principles right can lead to rewarding images, but as with anything photography related, the more you practice the better you will become. And this is where a great deal of patience come it: nobody will get the prefect freeze-frame on their first try, so just stick with it and practice on smaller objects. Once the basics have been mastered, progressively move towards more ambitious project, and before you know it you will be in the same league as the professionals.

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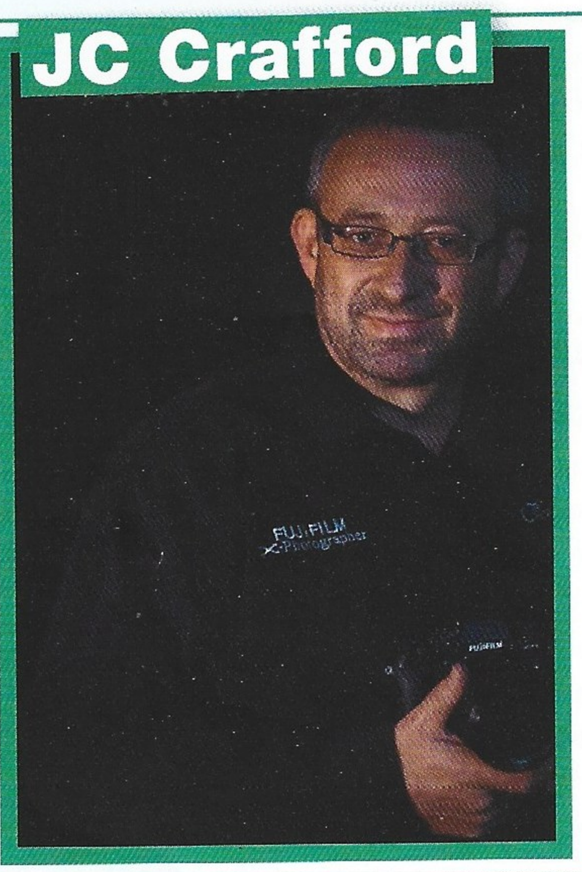

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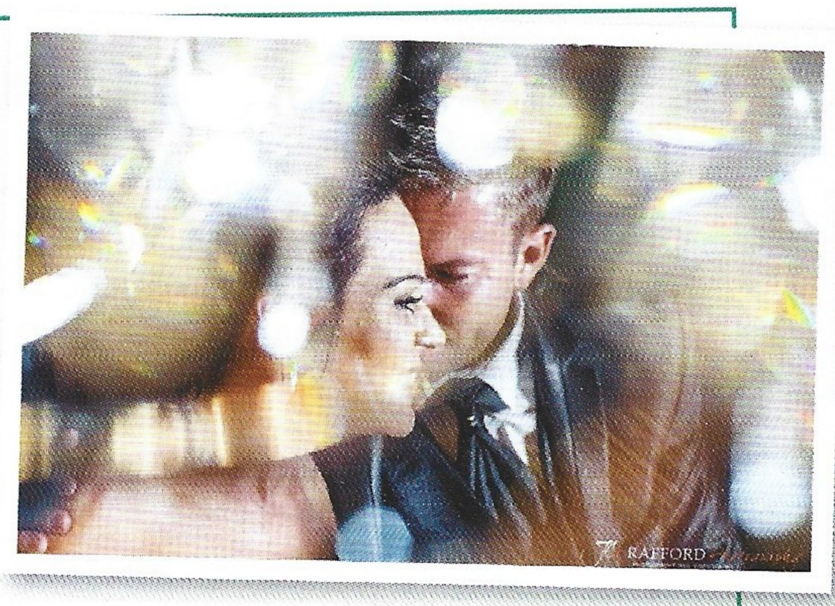

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Mardee Maree

I've been eagerly building my passion during the past decade gaining valuable experience in a number of photographic genres, with a special interest in portraits, weddings and fashion. Remember, making your hobby your job allows you the privilege of never working a day in your life.

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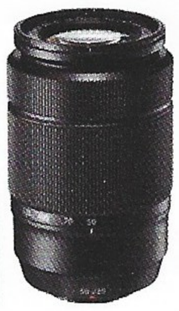

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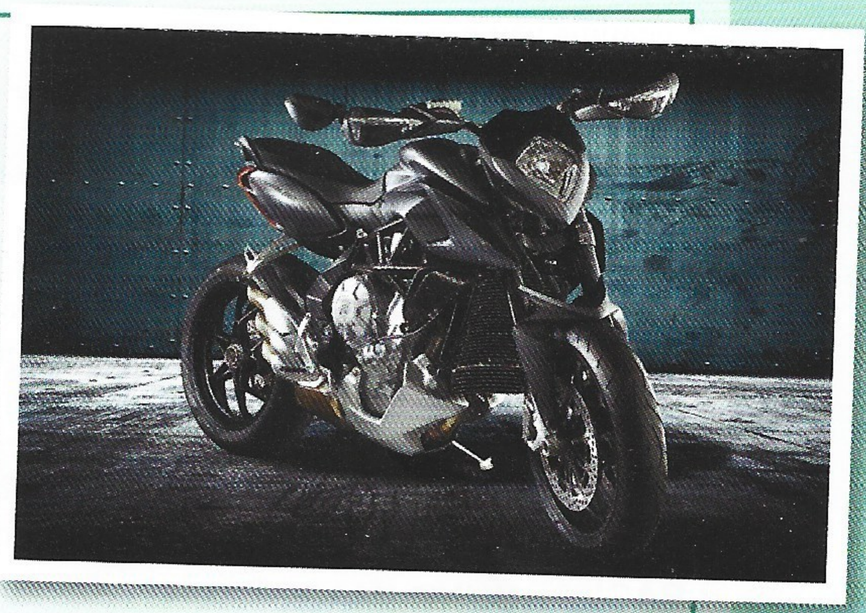

Pierre van der Walt is a JHB based Advertising Photographer who services the industry with a range of photographic styles and disciplines from Automotive through Fashion to Food and Product Photography. Understanding the important role images play in introducing products and services to a market, Pierre exploits his skill from being classically trained, in both digital & film, whether on location or in-studio, with the very best of equipment available to produce impactful images.

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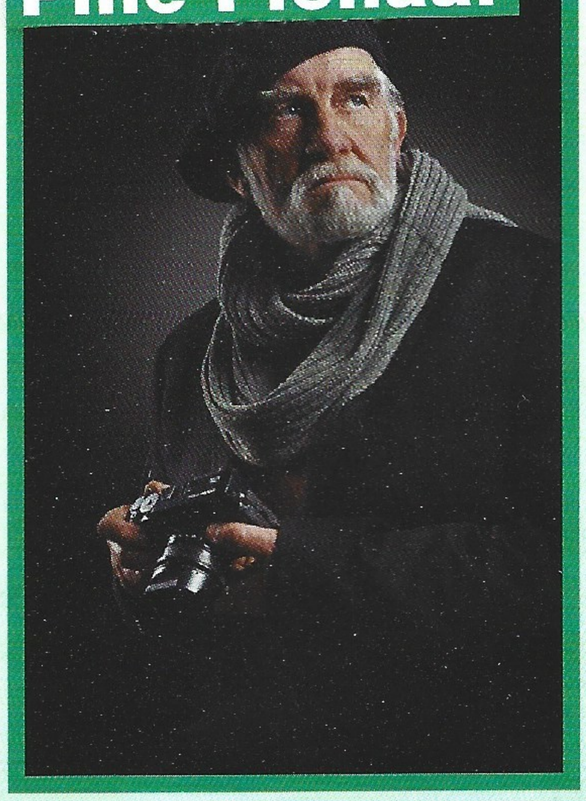

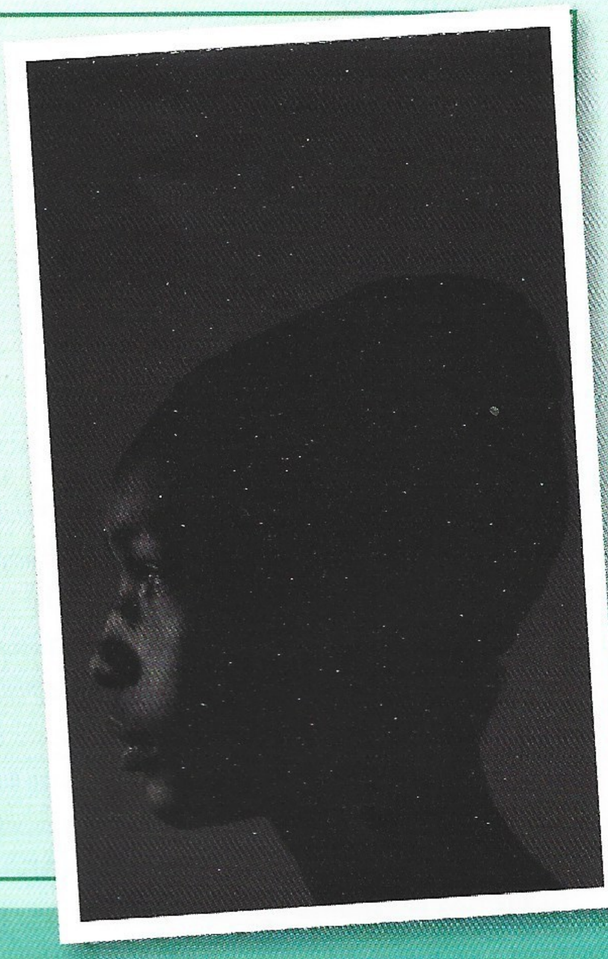

For me the essence of photograph lics in the idea. The rest is just button pushing. The tools I use are the basic design elements used for centuries: Form, shape, line and texture. Contextual content resides in the idea and is not always of primary concern. I believe or an image to be truly sublime and stand the test of time it must pose more questions than answers.

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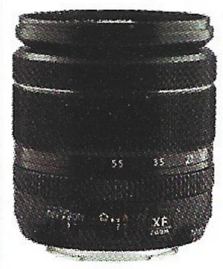
XF 18-55MM F2.8-4 R LM OIS

single versatile zoom featuring a maximum aperture of F2.8

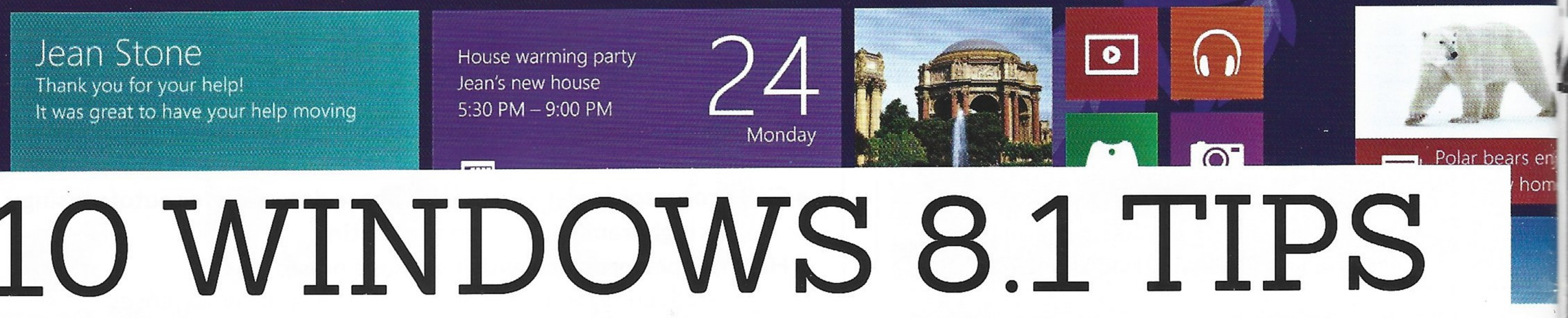


XF 18-135MM F3.5-5.6 R OIS WR

A high magnification zoom with 5.0-stop image stabilization technology

XF 55-200MM F3.5-4.8 R OIS

A large maximum aperture and a linear motor



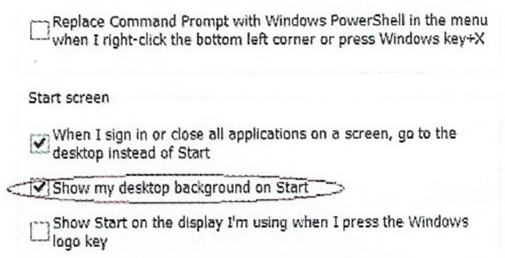
10 WINDOWS 8.1 TIPS

If you have to use it every day, there's no such thing as knowing too much about Windows 8.1.

CHANGE THE SIZE OF YOUR TILES

Windows 8.1 gives you four different tile sizes to choose from, meaning you can size the tiles on your Start Screen according to how much 'live data' the underlying app can display. To do it, simply right-click on the tile, go to Resize and choose the setting most appropriate to your tastes. That way, you can get creative with your tile layout and how it's arranged.

SHOW THE SAME BACKGROUND IMAGE WHEN VIEWING THE START SCREEN AND THE DESKTOP


Replace Command Prompt with Windows PowerShell in the menu when I right-click the bottom left corner or press Windows key+X
Start screen
When I sign in or close all applications on a screen, go to the desktop instead of Start
Show my desktop background on Start
Show Start on the display I'm using when I press the Windows logo key

Opening the Start Screen in Windows 8.1 can be a little off-putting when its background isn't the same as your desktop's. Fortunately, changing that is easy-peasy: simply right-click your taskbar and click Properties, then go to the Navigation tab. You'll see an option called 'Show my desktop background on Start'; put a tick in it and you're done.

SORT YOUR APPS LIST

By default, all of the apps on your Start Screen are listed alphabetically. If you'd prefer to sort them by the ones you use most frequently, or by the date they were installed, you can do that by clicking where you see "by category" in the heading. A list containing all three options will appear, and you need to click on the one that suits you best.

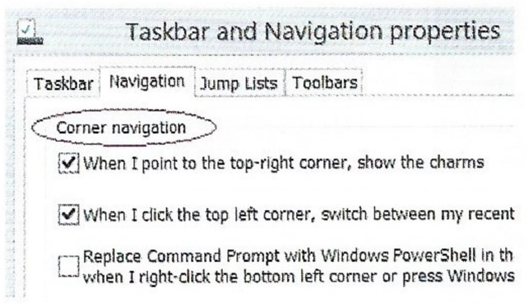
DISABLE OR ENABLE LIVE TILES

Windows 8's "Live Tiles" display information about the Start Menu's programs, like weather details, emails in the Mail app and updates from various social media. But not everyone likes or needs that, which makes the ability to turn "Live Tiles" off rather useful. To do it, all you have to do is right-click the tile that's annoying you and choose "Turn live tile off" from the menu. To do that to more than one tile, hold the left control key down when you're left-clicking tiles to choose them.

CUSTOMISE YOUR LOCK SCREEN

If you want a specific photo to show when your computer is locked, go to PC Settings, then choose PC and Devices. The first category is Lock Screen, and it's here you can choose the exact photo you wish to use from anywhere on your PC, OneDrive or a network share. You can also add an entire folder full of pictures to use that will play on your Lock screen in a slideshow by setting "Play a slide show on the lock screen" to ON.

DISABLE HOT CORNERS


Taskbar and Navigation properties
Taskbar
Navigation
Jump Lists
Toolbars
Corner navigation
When I point to the top-right corner, show the charms
When I click the top left corner, switch between my recent
Replace Command Prompt with Windows PowerShell in th
when I right-click the bottom left corner or press Windows

Disabling Windows 8's annoying hot corners is now much easier thanks to the Windows 8.1 update. To do it, simply right-click the taskbar, choose Properties then go to Navigation. The first two options under 'Corner navigation' are what you're looking for - remove the ticks from those two suckers and you'll never again accidentally open the Charms bar with an errant mouse cursor.

RUN APPS SIDE BY SIDE

Windows 8.1 apps can be positioned side by side just like desktop apps. First, load an app then press the Windows Key and the left or right arrow key. This shelves it to either side of your screen. Next, left-click on the blank second half of the screen and choose your second app – this will open it in the unfilled part of the screen. And voila, you have two Modern UI apps running side by side.

SAVE AND SYNC FOLDERS VIA ONEDRIVE

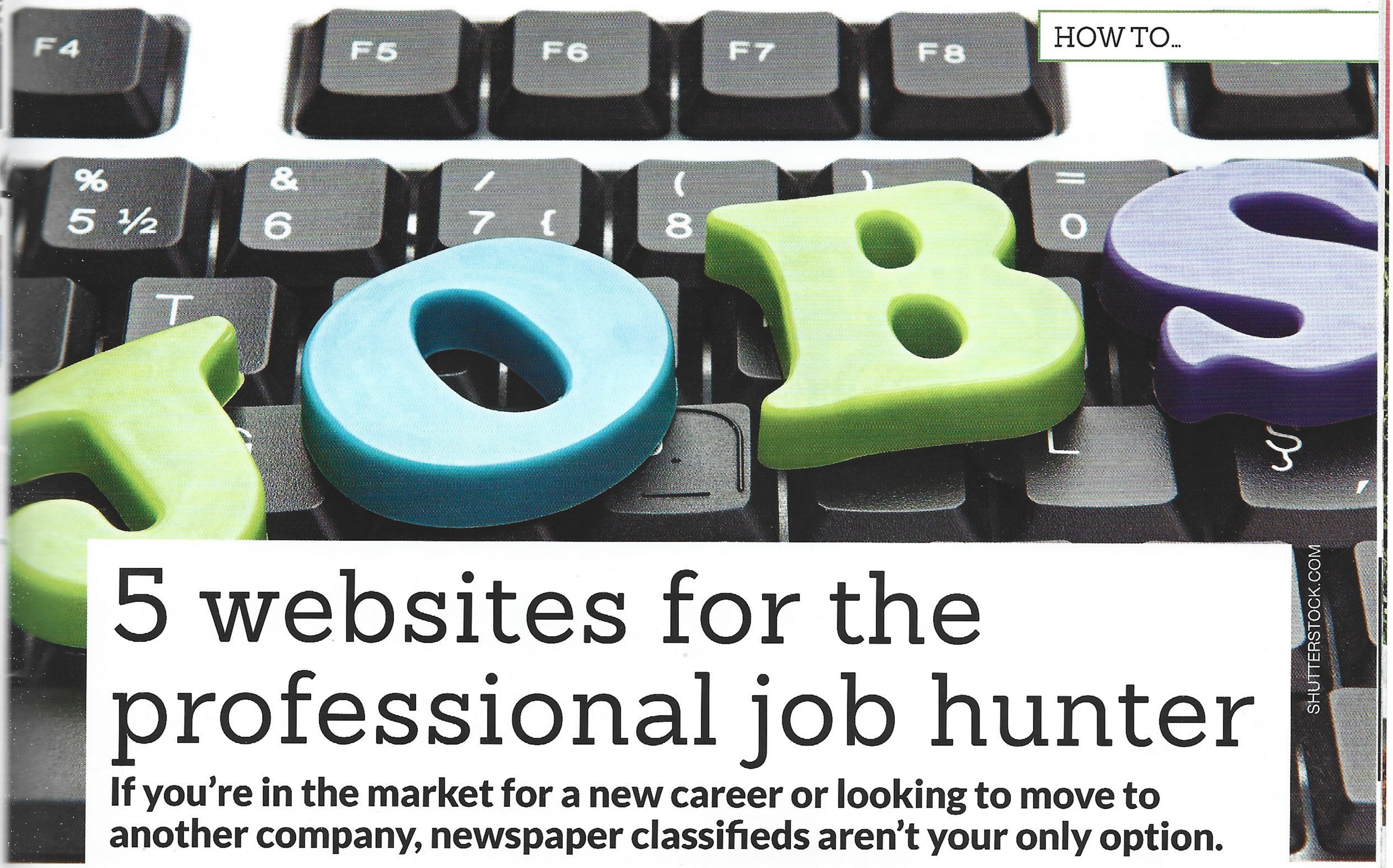
Microsoft's OneDrive cloud storage service is a great way to synchronise your files across your Windows 8.1 PCs. To do it, right-click on each folder you'd like to sync in Explorer, choose Properties and then go to Location. Click Move, choose OneDrive as the storage location and let Windows do the rest. Now, any time you save something to those folders, it will upload to the internet, and be available from your other Windows 8.1 PCs once they've synced over the 'net.

SELECT DEFAULT APPS

Choosing the app that opens certain file types by default is sometimes necessary if you have more than one that opens photos, for example. To choose the app that opens photos by default, open the Charms bar (swipe in from the right or press Win + C), click or tap Settings and then choose Change PC Settings. Choose Search and Apps, then click Defaults and make your selection.

SET TIMES WHEN NOTIFICATIONS ARE OFF

Windows 8 lets you specify "Quiet hours" where apps aren't allowed to send you notifications of any kind. To access it, open your Charms menu with Win + C or by moving your mouse cursor into the top right corner and then down and choose Change PC Settings. Go to the Search and Apps section, click Notifications, and set the hours you'd like to be left alone.



SHUTTERSTOCK.COM

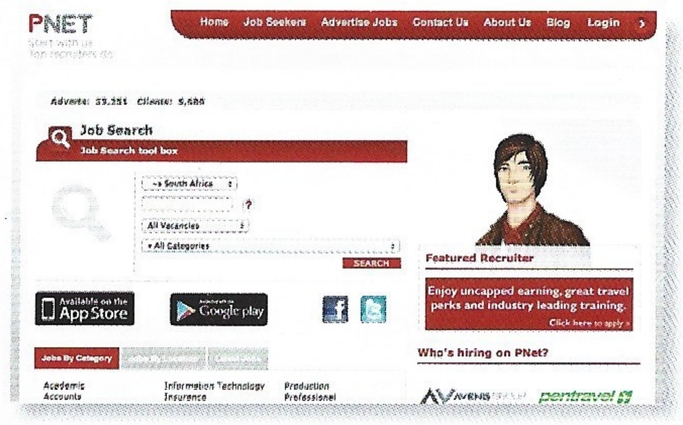
5 websites for the professional job hunter

If you're in the market for a new career or looking to move to another company, newspaper classifieds aren't your only option.

There are literally thousands of posts on the internet on different job sites every day. We've rounded up five sites below that are ideal, especially for professional occupation hunters:

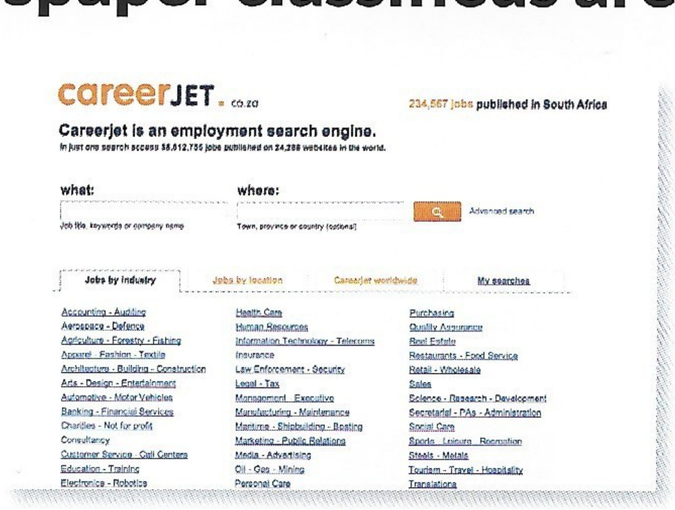
PNET

PNet was one of the first job-hunting sites in South Africa, established back in the late 90s. There are over 1.6 million jobseekers registered on the service, 9 000 recruiters and an average of 25,000 job adverts go live every month. You can search jobs either by category, location or recency. There's also a newsfeed on PNet where you can read up on the latest industry news from various news sites. - **www.pnet.co.za**



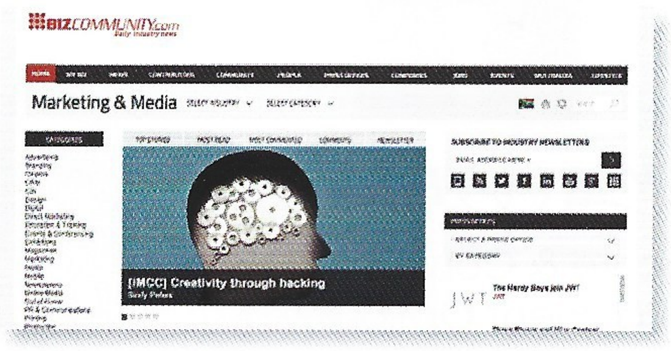
CAREERJET

Careerjet is a bit different to most job sites in that it doesn't feature jobs directly on the site but acts as a traffic driver to posts on other job sites such as JobMail and Gumtree. Careerjet not only features job posts from South Africa, but from countries all over the world as well. You can search jobs by industry, location, company name or keyword. - **www.careerjet.com**



BIZCOMMUNITY

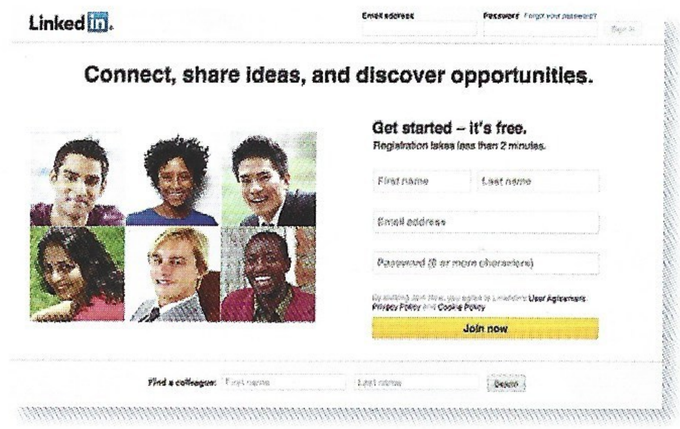
Bizcommunity's jobs portal is one of the biggest and most popular in the country. It's easy to navigate, has a comprehensive filtering system that lets you search for specific posts and requirements you may have. You'll find posts from a lot of big companies across different industries in the country. You can also upload your CV onto Bizcommunity to apply for posts directly from the site. - **www.bizcommunity.com**



LINKEDIN

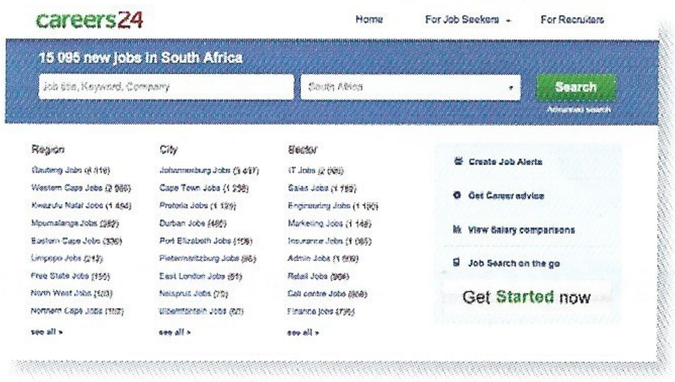
LinkedIn has literally changed the way we network and communicate in the working world. Many people use the site to market themselves in the hopes of being picked up by potential employers and many recruiters use LinkedIn to scout for employees.

On LinkedIn can create a full profile and include your photo, qualifications, experiences, areas of expertise and skill, interests and contact details, connect with professionals on a one-on-one basis, search for available job posts and updates from the industry or company you are interested in and much more. - **www.linkedin.com**



CAREERS24

Careers24 is a simplified site that features over 10 000 new job posts every month. Like other job sites, you can search job by category and location and upload your CV for easy application. Other added features include career advice from various professionals as well as a salary comparison calculator that lets you find out your current market worth. - **www.careers24.com**



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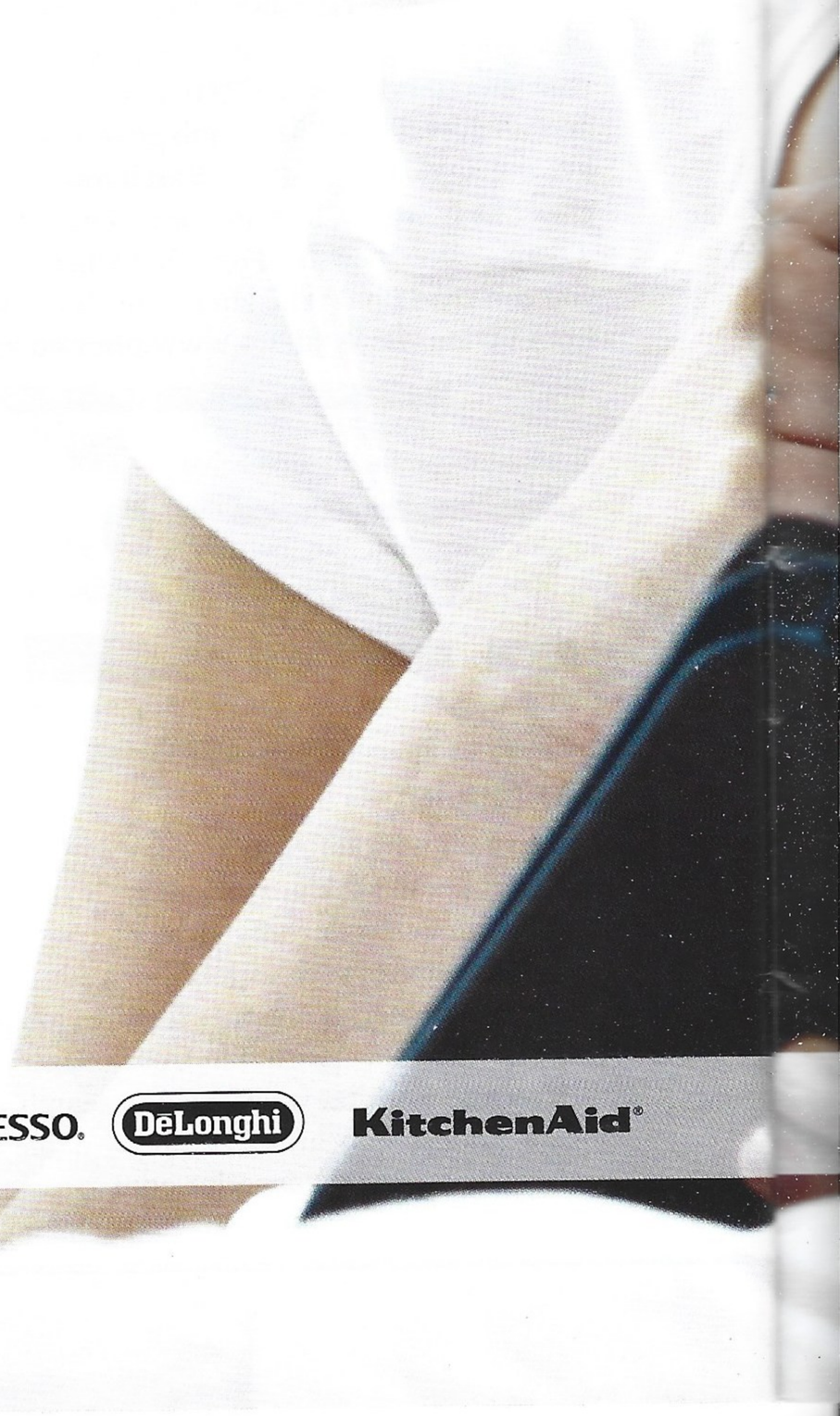

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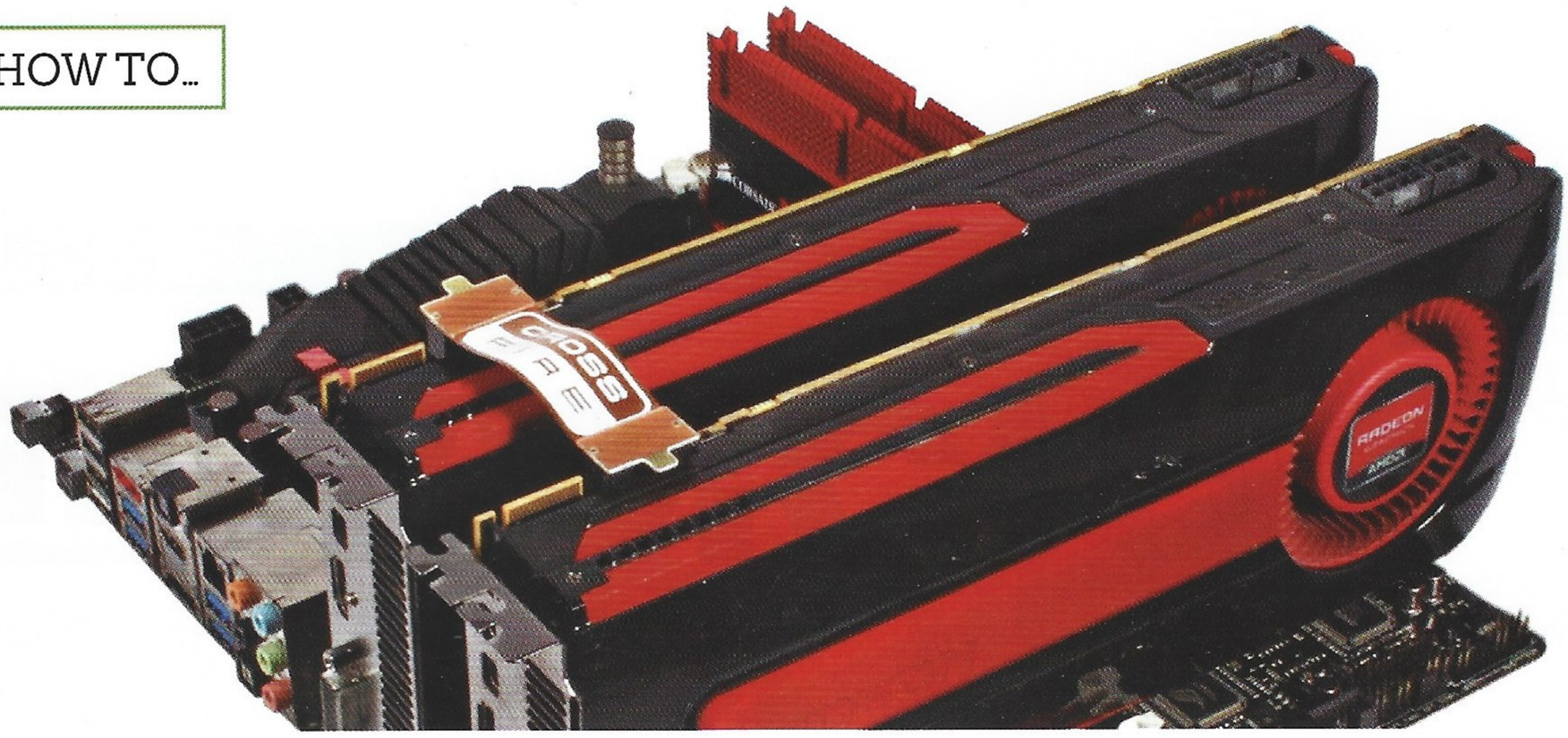
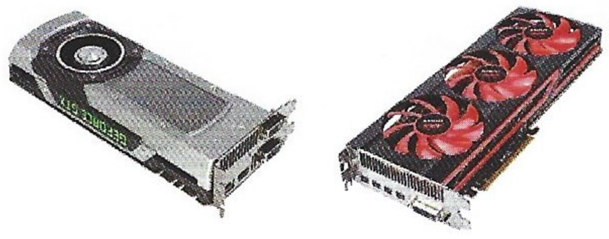


How to upgrade your PC's graphics card

Upgrading your system's graphics card is the best way to make your games look better and run faster.

GET A NEW ONE

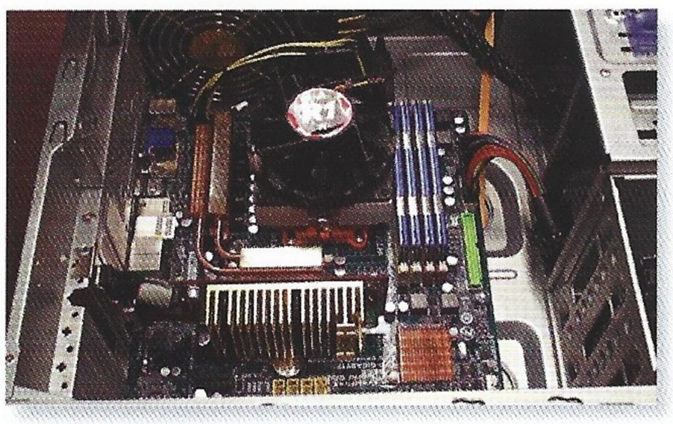
First, you need to buy a new one. While there are many, many choices out there at various price points and performance levels, we're going to recommend NVIDIA's GeForce GTX 770 and AMD's Radeon R9 280X as the cards that offer you the best performance for your money right now. They both cost between R4 000 to R5 000.



AMD AND NVIDIA CARDS

You just need to make sure you have a power supply that's 650W or bigger before buying either one, as these cards can use quite a bit of electricity when they're rendering graphics at high resolutions and with all the pretty-making features turned on.

OUT WITH THE OLD



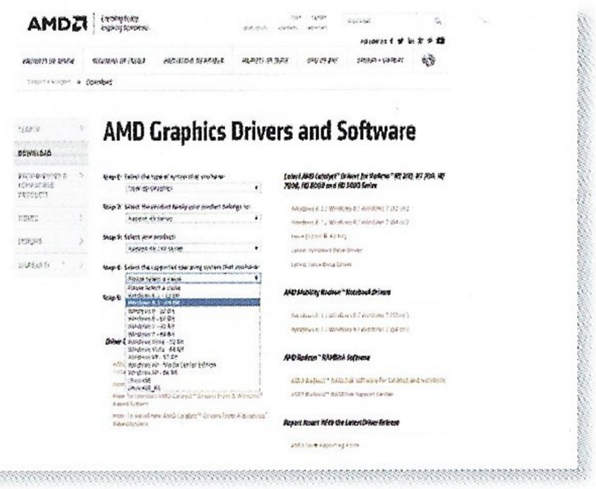
Now, you need to take the old one out. To do that, unplug everything that's going into the back of your desktop PC and move the tower to an uncluttered flat surface somewhere. Remove all screws securing the case's side panel, and open the case up.

If you have an old graphics card, this is where you'll unscrew the single screw keeping it in place, press gently on the plastic tab that keeps it clicked into the motherboard (that big green piece of flat plastic that everything plugs in to), and give it a pull. It should come away easily. If your old graphics card uses an extra power cable, make sure that's disconnected first. If you've never had a dedicated graphics card because you've been using onboard video, ignore this step.

IN WITH THE NEW

Now unpack your shiny new graphics card and insert it into the slot your old card just vacated, and secure it with a screw. You should hear a satisfying click as the card is seated correctly. It will need extra power, so grab the little cable that came with the card and plug it into one of the spare power plugs from your power supply. Plug the other end into the power port on the rear of your new card.

Close your case and secure it with screws once again. Reconnect everything and switch your PC on; Windows will detect that new hardware has been installed and attempt to install a basic driver so you can see what you're doing. Open a browser and go to Google; enter the name of your graphics card followed by the word "drivers", and follow the links that appear to the correct page. Download the latest drivers for your operating system and install them once they're down.



GAME ON

Once that's all been done, you will need to reboot your system. When you're back into Windows, all that's left to do is play any game you please and enjoy the faster frame rates, superior smoothness and the option to crank all settings to the maximum without taking a performance hit.

TECH JARGON

Onboard graphics: A graphics processor that is embedded into a motherboard. It outputs video signals to a monitor or TV so you can see your desktop and run basic programs, but is generally not as powerful as a dedicated graphics card for things like games and detailed 3D graphics.

Frame rates: The measure of the number of frames per second a graphics card can output. The higher the frame rate, the more smooth video looks.

Dedicated graphics gard: A separate piece of hardware dedicated to a single function, that of rendering graphics as fast as possible.

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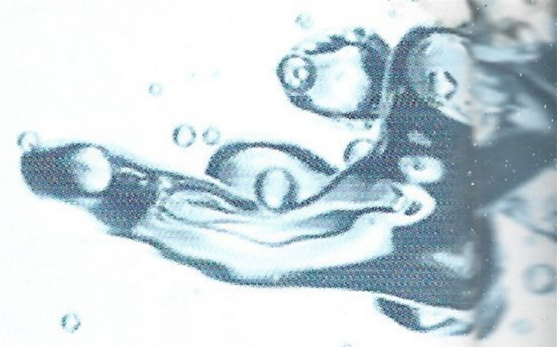

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Don't worry, though. If you want to guarantee that you'll be able to get hold of next month's issue – and, indeed, every issue after that – you can subscribe and get the magazine delivered directly to you. All we ask is for a small contribution to help cover postage fees, and we'll mail you a copy at the start of every month while the mag is hot off the presses. Better still, you can sign up for our daily email newsletter, and never miss any news at all.

Still can't make up your mind whether or not subscribing is worth it? How about we tempt you with this? We'll enter you in the draw to win Nintendo's new 2DS handheld. With an eye-catching pink design, complete with a white stripe across the side and back of the system, the 2DS includes the same intuitive gameplay controls and wireless connectivity features for access to local and online multiplayer gameplay, Nintendo eShop and more. The pink 2DS to represents the official Kirby colours when playing Kirby: Triple Deluxe, a platforming experience full of colourful landscapes and enemies big and small for Kirby to inhale, including certain foes which he can suck up and then copy their unique abilities! Read a full review of the game here: **Bit.ly/1m3qOtZ**

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48 900
people visited this year's E3 gaming conference in Los Angeles this month. Check out the best titles of the show here: Bit.ly/1iE2wmA

A new website for anonymous tip-offs about **wildlife poaching** is hoping to help save elephant, rhino and the last 400 Sumatran tigers left in the world
Bit.ly/1iE2XgH

1/3
of South African teachers lack basic IT training.
Bit.ly/110jKzf

Google reckons it's Loon balloons can beam the internet to your handset at 40Mbps. Bit.ly/110jm3I

R0 - the cost of a WiFi connection at the Union Buildings in Pretoria thanks to Project Isizwe. Bit.ly/1iE363P

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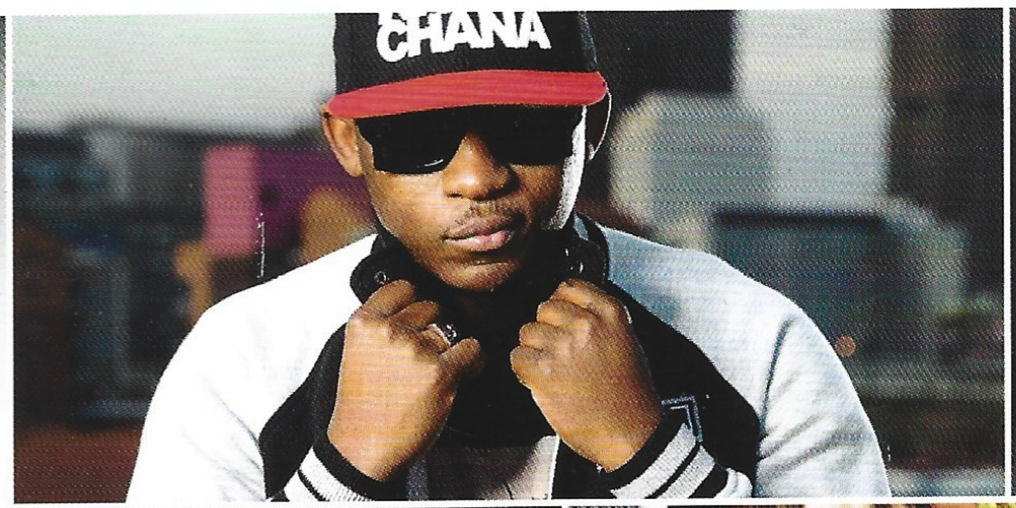

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